



American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.

## **MINUTES**

### **BOARD OF DIRECTORS MEETING**

Fairmont Queen Elizabeth Hotel  
Montreal, PQ, Canada  
June 29, 2011

**Note:** These draft minutes have not been approved and are not the official, approved record until approved by the Board of Directors.

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Board of Directors Meeting  
June 29, 2011

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**Principal Motions**  
Board of Directors Meeting  
June 29, 2011

- | <u>No – Pg.</u> | <u>Motion</u>   |
|-----------------|---|
| 1 - 2           | That the following be approved: <ul style="list-style-type: none"><li>A. That King &amp; Spalding be retained as ASHRAE legal counsel for fiscal year 2011-2012.</li><li>B. That Lesesne Capital Management, Inc. be approved as ASHAE investment advisor for fiscal year 2011-2012.</li><li>C. That Jones &amp; Kolb be approved as Certified Public Accountant for ASHRAE for fiscal year 2011-2012.</li><li>D. That the appropriate and required bank resolutions for institutions in which ASHRAE funds are deposited as executed by officers for 2011-2012 be approved.</li></ul>  |
| 2 - 2           | That the rules requiring that the President of ASHRAE Research Canada be appointed as a consultant to the Research Promotion Committee be waived to allow Jeff Clarke, a member of ASHRAE Research Canada, to be appointed to this position.  |
| 3 - 3           | That 2011-2012 committee appointments as listed in <b>Attachment B</b> be approved.   |
| 4 - 3           | That the Scholarship Program Guidelines be amended as follows:<br>General Guidelines:<br>2.8 No preference shall be given by the Scholarship Trustees to any candidate <del>who is or has been,</del> or whose relative is, or has been, a member of ASHRAE, the Board of Directors and/or the Scholarship Trustees. <del>No candidate shall be allowed to indicate any relative's activities in ASHRAE on the scholarship application form. At the discretion of the Scholarship Trustees, any such indication may result in the disqualification of the candidate's scholarship application form from further consideration.</del>  |
| 5 - 3           | That the Board of Directors direct Technology Council to provide guidance to Standards Committee and SSPC 90.2 to position Standard 90.2 as a leadership standard. -The Council will consider increased energy efficiency, sustainability and health and safety.  |
| 7 - 5           | That ROB 1.201.002, Units Policy, be reaffirmed.  |
| 8 - 5           | That consent motions 1-22 of the Technology Council report be approved: <ul style="list-style-type: none"><li>1. that BSR/ASHRAE Standard 32.2-2003 (RA 2011), <i>Methods of Testing for Rating Pre-Mix and Post-Mix Beverage Dispensing Equipment</i>, be approved for publication.</li><li>2. that BSR/ASHRAE Addendum <i>i</i> (adds new refrigerant 1234ze (E) to Tables 1, <i>Refrigerant Data and Safety Classifications</i> and D1, <i>Refrigerant Data</i>) to ANSI/ASHRAE Standard 34-2010, <i>Designation and Safety Classification of Refrigerants</i>, be approved for immediate publication.</li><li>3. that BSR/ASHRAE Addendum <i>j</i> (adds new azeotropic refrigerant 511A to Table 2, <i>Data and Safety Classifications for Refrigerant Blends</i> and Table D2, <i>Data for Refrigerant Blends</i>) to ANSI/ASHRAE Standard 34-2010, <i>Designation and Safety Classification of Refrigerants</i>, be approved for immediate publication.</li><li>4. that BSR/ASHRAE Addendum <i>k</i> (deletes the provisional status of refrigerant concentration limit (RCL) values for refrigerants 14, 115, 170, C318, 1270, 405A, 416A, 417A, 424A, 426A, and 504) to ANSI/ASHRAE Standard 34-2010, <i>Designation and Safety Classification of Refrigerants</i>, be approved for immediate publication.</li></ul> |

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5. that BSR/ASHRAE Addendum *l* (changes the cardiac sensitization no observed effect level (NOEL) values and deletes the lowest observed effect level (LOEL) value for R-32) to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, be approved for immediate publication.
6. that BSR/ASHRAE Addendum *n* (requires refrigerant applicants to provide ‘pressure at the critical point’ data) to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, be approved for immediate publication.
7. that BSR/ASHRAE Addendum *o* (clarifies the requirements of clause B1, *Flammability Testing*) to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, be approved for immediate publication.
8. that BSR/ASHRAE Addendum *a* (clarifies Figures 5.2.3.2 and 5.3 by providing numerical adjustment factors and equations) to ANSI/ASHRAE Standard 55-2010, *Thermal Environmental Conditions for Human Occupancy*, be approved for publication.
9. that BSR/ASHRAE Addendum *d* (adds an alternative exhaust rate design procedure that provides the designer with a performance path) to ANSI/ASHRAE Standard 62.1-2010, *Ventilation for Acceptable Indoor Air Quality*, be approved for publication.
10. that BSR/ASHRAE Addendum *e* (clarifies requirements for system control needed to assure proper ventilation rates) to ANSI/ASHRAE Standard 62.1-2010, *Ventilation for Acceptable Indoor Air Quality*, be approved for publication.
11. that BSR/ASHRAE/IES Addendum *b* (permits automatic stopping and starting of escalators or moving walks) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
12. that BSR/ASHRAE/IES Addendum *c* (clarifies use of an outdoor air bypass damper that ensures a constant volume stack discharge as the baseline approach) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
13. that BSR/ASHRAE/IES Addendum *g* (adds Table 6.8.1L defining minimum efficiency requirements for commercial refrigerators and freezers) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
14. that BSR/ASHRAE/IES Addendum *h* (amends the minimum energy efficiency standards for water-to-air heat pumps listed in Table 6.8.1B, *Electrically Operated Unitary and Applied Heat Pumps – Minimum Efficiency Requirements*) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
15. that BSR/ASHRAE/IES Addendum *j* (corrects EER values in table 6.8.1A, *Electrically Operated Unitary Air Conditioners and Condensing Units- Minimum Efficiency Requirements*) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
16. that BSR/ASHRAE/IES Addendum *k* (makes transformer test procedures references consistent with references in Chapter 6) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.

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17. that BSR/ASHRAE/IES Addendum *ci* (cooling tower fans) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
  18. that BSR/ASHRAE/IES Addendum *ds* (*corrects daylighting definitions*) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
  19. that BSR/ASHRAE Addendum *ad* (fixes miscellaneous problems in the standard such as allowing Feedback\_Value to be used to calculate Elapsed\_Active\_Time, adds conditions to Read-Property and increases the segmentation window size for MS/TO) to ANSI/ASHRAE Standard 135-2010, *BACnet®—A Data Communication Protocol for Building Automation and Control Networks*, be approved for publication.
  20. that BSR/ASHRAE Addendum *ae* (adds and clarifies authentication coding and access properties) to ANSI/ASHRAE Standard 135-2010, *BACnet®—A Data Communication Protocol for Building Automation and Control Networks*, be approved for publication.
  21. that BSR/ASHRAE Addendum *af* (modifies events and alarms) to ANSI/ASHRAE Standard 135-2010, *BACnet®—A Data Communication Protocol for Building Automation and Control Networks*, be approved for publication.
  22. that BSR/ASHRAE Standard 158.2-2006R, *Methods of Testing Capacity of Refrigerant Pressure Regulators*, be approved for publication.
- 9 - 7    That consent motions 23-29 of the Technology Council report be approved:
23. that BSR/ASHRAE/USGBC/IES Addendum *c* (groups outdoor air definitions for easier reference) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.
  24. that BSR/ASHRAE/USGBC/IES Addendum *d* (updates the reference to CDPH/EHLB/Standard Method V1.1) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.
  25. that BSR/ASHRAE /USGBC/IES Addendum *e* (clarifies the requirements of E1.1, IAQ Limit Requirements) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.
  26. that BSR/ASHRAE /USGBC/IES Addendum *h* (proposes to update Section 7.4.3, *Heating, Ventilating, and Air Conditioning*) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.
  27. that BSR/ASHRAE /USGBC/IES Addendum *j* (updates Section 7.5, *Energy Performance Path* and Appendix D, *Performance Option for Energy Efficiency*) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.

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28. that BSR/ASHRAE /USGBC/IES Addendum *k* (adds requirement related to invasive plants and tree growth) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.
29. that BSR/ASHRAE/USGBC/IES Addendum *o* (adds requirements for pedestrian friendly walkways) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.
- 10 - 7    That consent motions 31-34 of the Technology Council report be approved:
31. that BSR/ASHRAE Addendum *i* (provides an infiltration rate for the methodology for intermittent ventilation) to ANSI/ASHRAE Standard 62.2-2010, *Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings*, be approved for publication
32. that BSR/ASHRAE Addendum *l* (provides requirements for installation of a carbon monoxide alarm) to ANSI/ASHRAE Standard 62.2-2010, *Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings*, be approved for publication
33. that BSR/ASHRAE Standard 145.2P, *Laboratory Test Method for Assessing the Performance of Gas-Phase Air Cleaning Systems: Air Cleaning Devices*, be approved for publication.
34. that BSR/ASHRAE/ASHE Addendum *h* (clarifies the use of recirculating units through modifications to four parts of the standard) to ANSI/ASHRAE/ASHE Standard 170-2008, *Ventilation of Health Care Facilities*, be approved for publication.
- 11 - 8    That consent motions 35-36 of the Technology Council report be approved:
35. that BSR/ASHRAE/USGBC/IES Addendum *f* (changes to the renewable energy requirements in Standard 189.1-2009) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.
36. that BSR/ASHRAE/USGBC/IES Addendum *l* (improves clarity related to heat island reduction provisions) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.
- 12 - 8    That consent motion 30 of the Technology Council report be approved:
30. that BSR/ASHRAE Addendum *c* (changes the OEL for R-1234yf from 400 to 500 to be consistent with the AIHA workplace environmental exposure level (WEEL) value) to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, be approved for immediate publication.
- 13 - 8    That consent motions 37-45 of the Technology Council report be approved:
37. that the *Procedures for ASHRAE Guidelines Actions (PAGA)* be withdrawn and Rules of the Board (ROB) 2.425.003.1, *General Requirements*, ROB 2.425.003.3, ROB 2.425.003.6 and ROB 2.425.004 be approved as shown in **Appendix OS-A** [of Technology Council report].

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38. that Rules of the Board 2.425.001, *Scope and Purpose* be approved as shown in **Appendix OS-B** [of Technology Council report].
39. that Rules of the Board, Volume 2: Standing Rules – General Rules, Board, Council and Committees, be modified as indicated below.

## 2.421 RESEARCH ADMINISTRATION COMMITTEE

## 2.421.004 Operation

## 2.421.004.7 Awards (07-06-27-33)

- A. This committee shall select one student from an eligible institution as the recipient of the annual Homer Addams Award in accordance with the ROB and RAC MOP. (64-06-28-44/71-08-25-14/83-06-26/92-01-30-61/99-01-28-66)
- B. This committee shall select the annual recipient of the Service to ASHRAE Research Award in accordance with the ROB and RAC MOP.
- C. This committee shall implement the annual grant-in-aid program in accordance with the ROB and RAC MOP.
- D. This committee shall have the option of selecting annually the recipient of an annual ASHRAE New Investigator Award to (a) enhance the academic careers of recent Ph.D. recipients, (b) promote research related to the goals of ASHRAE in universities and colleges, and (c) promote educational efforts related to the goals of ASHRAE. (520-162-013) (99-01-28-66)
- E. This committee shall have the option of selecting up to ten grant recipients of the ASHRAE Research - International Dissemination Travel Grant Program annually in accordance with the ROB, RAC MOP and RAC Reference Manual.
- F. This committee shall have the option of selecting annual recipients of ASHRAE Annual Innovation Research Grants in accordance with the ROB, RAC MOP and RAC Reference Manual.

40. that ROB Volume 2: Standing Rules – General Rules, Board, Council and Committees, be modified as indicated below.

## 2.421 RESEARCH ADMINISTRATION COMMITTEE

## 2.421.006 [Research Administration Committee] MANUALS AND PROCEDURES

2.421.006.1 This committee is responsible for reviewing, recommending changes and interpreting the following:

- A. Model Research Agreement
- B. Recommended Qualifications for new RAC Members
- C. Research Strategic Plan

41. that ROB Volume 2: *Standing Rules – General Rules, Board, Council and Committees*, and Volume 3: *Manual of Procedures for Officers and Directors of the Rules of the Board*, be modified as indicated in **Appendix OS-C** [of Technology Council report].
42. that ROB Volume 2: *Standing Rules – General Rules, Board, Council and Committees*, be modified as indicated below.

## 2.303.002 Research Agreement

This council monitors, approves and maintains the —Model Research Agreement

## 2.303.008 Policies, Manuals and Procedures

This council is responsible for reviewing, recommending changes and interpreting the following:

Standards Development Policy

Procedures for ASHRAE Standards Actions (PASA)

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Procedures for ASHRAE Guidelines Actions (PAGA)  
 Procedures for Developing ASHRAE Position Documents and Position Statements  
 Guidelines for Developing ASHRAE Position Briefs  
 All Position Documents and Position Statements  
 Model Research Agreement

43. that ROB Volume 2: Standing Rules – General Rules, Board, Council and Committees be modified as indicated below.

## 2.421 RESEARCH ADMINISTRATION COMMITTEE

## 2.421.004 Operation

## 2.421.004.1 General Requirements

- D. This committee shall cooperate with the Technical Committees, Task Groups, Multidisciplinary Task Groups w/research authority, Environmental Health Committee, Refrigeration Committee, and Standing Standards Project Committees to plan, develop, contract, monitor and disseminate the results of research and technical projects in accordance with RAC guides. The Technical Committees, Task Groups, Multidisciplinary Task Groups w/research authority, Environmental Health Committee, Refrigeration Committee, and Standing Standards Project Committees shall be responsible for the technical content of the projects. This committee shall review and monitor the work of the Technical Committees, and Task Groups, Multidisciplinary Task Groups w/research authority, Environmental Health Committee, Refrigeration Committee, and Standing Standards Project Committees to ensure that said projects are consistent with the Society's research objectives and that ASHRAE procedures have been followed. (99-01-28-65/07-06-27-30)

44. that the following Title, Purpose and Scope (TPS) be approved and that a new Standard Project Committee be formed:

**TITLE:** Laboratory Method of Test of Fault Detection and Diagnostics Applied Commercial Air-Cooled Packaged Systems

**PURPOSE:**

This standard provides a method to define an FDD tool's function. This standard also provides a method of laboratory test for the performance of Fault Detection and Diagnostic (FDD) tools on commercial air-cooled packaged equipment.

**SCOPE:**

2.1 This standard applies to commercial air-cooled packaged air conditioning systems.

2.2 The test is a physical laboratory test on a particular combination of diagnostic tool for each model of a unitary system.

2.3 This standard applies to any on-board, after-market or hand-held hardware and/or software functionality that detects and/or diagnoses problems that lead to degraded performance such as, energy efficiency, capacity, increased maintenance costs or shortened equipment life.

45. that the following Title, Purpose and Scope (TPS) be approved and that a new Standard Project Committee be formed:

**TITLE:** Method of Test for Determining Hydronic System Balance Valve Capacity

**PURPOSE:** This standard provides standard capacity test procedures, definitions and

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requirements for valve calibration, and reporting of operational characteristics.

**SCOPE:** This standard applies to manual and automatic balancing valves utilized in hydronic HVAC and building plumbing systems. This standard also applies to pressure independent control valves and actuated and non-actuated valves.

- 14C - 11    That Board of Directors members be charged a registration fee calculated by applying a 75% discount to the member full registration fee rounded up to the nearest \$5.00 for winter and annual meetings beginning with the winter meeting in 2013.

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## Action Items

Board of Directors Meeting  
June 29, 2011

<u>No – Pg.</u>	<u>Responsibility</u>	<u>Summary of Action</u>	<u>Status</u>
1 - 2	Littleton	Notify King & Spalding of Board approval of the firm as ASHRAE legal counsel for 2011-12.	_____
2 - 2	Littleton	Notify Lesesne Capital Management of Board approval of the firm as ASHRAE investment advisor for 2011-12.	_____
3 - 2	Littleton	Notify Jones & Kolb of Board approval of the firm as ASHRAE certified public accountant for 2011-12.	_____
4 - 3	Littleton	Revise Scholarship Guidelines section 2.8.	_____
5 - 5	Littleton	Log in ROB the BOD reaffirmation of ASHRAE Units Policy.	_____
6 - 5	Littleton	Publish BSR/ASHRAE Standard 32.2-2003 (RA 2011).	_____
7 - 5	Littleton	Publish BSR/ASHRAE Addendum <i>i</i> to ANSI/ASHRAE Standard 34-2010.	_____
8 - 5	Littleton	Publish BSR/ASHRAE Addendum <i>j</i> to ANSI/ASHRAE Standard 34-2010.	_____
9 - 5	Littleton	Publish BSR/ASHRAE Addendum <i>k</i> to ANSI/ASHRAE Standard 34-2010.	_____
10 - 5	Littleton	Publish BSR/ASHRAE Addendum <i>l</i> to ANSI/ASHRAE Standard 34-2010.	_____
11 - 6	Littleton	Publish BSR/ASHRAE Addendum <i>n</i> to ANSI/ASHRAE Standard 34-2010.	_____
12 - 6	Littleton	Publish BSR/ASHRAE Addendum <i>o</i> to ANSI/ASHRAE Standard 34-2010.	_____
13 - 6	Littleton	Publish BSR/ASHRAE Addendum <i>a</i> to ANSI/ASHRAE Standard 55-2010.	_____
14 - 6	Littleton	Publish BSR/ASHRAE Addendum <i>d</i> to ANSI/ASHRAE Standard 62.1-2010.	_____
15 - 6	Littleton	Publish BSR/ASHRAE Addendum <i>e</i> to ANSI/ASHRAE Standard 62.1-2010.	_____
16 - 6	Littleton	Publish BSR/ASHRAE/IES Addendum <i>b</i> to ANSI/ASHRAE/IES Standard 90.1-2010.	_____
17 - 6	Littleton	Publish BSR/ASHRAE/IES Addendum <i>c</i> to ANSI/ASHRAE/IES Standard 90.1-2010.	_____
18 - 6	Littleton	Publish BSR/ASHRAE/IES Addendum <i>g</i> to ANSI/ASHRAE/IES Standard 90.1-2010.	_____

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19 - 6	Littleton	Publish BSR/ASHRAE/IES Addendum <i>h</i> to ANSI/ASHRAE/IES Standard 90.1-2010.	_____
20 - 6	Littleton	Publish BSR/ASHRAE/IES Addendum <i>j</i> to ANSI/ASHRAE/IES Standard 90.1-2010.	_____
21 - 6	Littleton	Publish BSR/ASHRAE/IES Addendum <i>k</i> to ANSI/ASHRAE/IES Standard 90.1-2010.	_____
22 - 6	Littleton	Publish BSR/ASHRAE/IES Addendum <i>ci</i> to ANSI/ASHRAE/IES Standard 90.1-2010.	_____
23 - 6	Littleton	Publish BSR/ASHRAE/IES Addendum <i>ds</i> to ANSI/ASHRAE/IES Standard 90.1-2010.	_____
24 - 6	Littleton	Publish BSR/ASHRAE Addendum <i>ad</i> to ANSI/ASHRAE Standard 135-2010.	_____
25 - 6	Littleton	Publish BSR/ASHRAE Addendum <i>ae</i> to ANSI/ASHRAE Standard 135-2010.	_____
26 - 6	Littleton	Publish BSR/ASHRAE Addendum <i>af</i> to ANSI/ASHRAE Standard 135-2010.	_____
27 - 6	Littleton	Publish BSR/ASHRAE Standard 158.2-2006R.	_____
28 - 7	Littleton	Publish BSR/ASHRAE/USGBC/IES Addendum <i>c</i> (groups outdoor air definitions for easier reference) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009.	_____
29 - 7	Littleton	Publish BSR/ASHRAE/USGBC/IES Addendum <i>d</i> (groups outdoor air definitions for easier reference) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009.	_____
30 - 7	Littleton	Publish BSR/ASHRAE/USGBC/IES Addendum <i>e</i> (groups outdoor air definitions for easier reference) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009.	_____
31 - 7	Littleton	Publish BSR/ASHRAE/USGBC/IES Addendum <i>h</i> (groups outdoor air definitions for easier reference) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009.	_____
32 - 7	Littleton	Publish BSR/ASHRAE/USGBC/IES Addendum <i>j</i> (groups outdoor air definitions for easier reference) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009.	_____
33 - 7	Littleton	Publish BSR/ASHRAE/USGBC/IES Addendum <i>k</i> (groups outdoor air definitions for easier reference) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009.	_____
34 - 7	Littleton	Publish BSR/ASHRAE/USGBC/IES Addendum <i>o</i> (groups outdoor air definitions for easier reference) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009.	_____

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35 - 7	Littleton	Publish BSR/ASHRAE Addendum <i>i</i> to ANSI/ASHRAE Standard 62.2-2010.	_____
36 - 7	Littleton	Publish BSR/ASHRAE Addendum <i>l</i> to ANSI/ASHRAE Standard 62.2-2010.	_____
37 - 7	Littleton	Publish BSR/ASHRAE Standard 145.2P.	_____
38 - 8	Littleton	Publish BSR/ASHRAE/ASHE Addendum <i>h</i> to ANSI/ASHRAE/ASHE Standard 170-2008.	_____
39 - 8	Littleton	Publish BSR/ASHRAE/USGBC/IES Addendum <i>f</i> to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009.	_____
40 - 8	Littleton	Publish BSR/ASHRAE/USGBC/IES Addendum <i>l</i> to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009.	_____
41 - 8	Littleton	Publish BSR/ASHRAE Addendum <i>c</i> to ANSI/ASHRAE Standard 34-2010.	_____
42 - 8	Littleton	<i>Delete Procedures for ASHRAE Guidelines Actions (PAGA) from the Rules of the Board and revise ROB 2.425.003.1, 2.425.003.3, 2.425.003.6 and ROB 2.425.004 as shown in Appendix OS-A of Technology Council report.</i>	_____
43 - 8	Littleton	Revise ROB 2.425.001.	_____
44 - 8	Littleton	Revise ROB 2.421.004.7 Awards.	_____
45 - 9	Littleton	Revise ROB 2.421.006.1.	_____
46 - 9	Littleton	Revise ROB Volumes 2 and 3 as shown in Appendix OS-C of Technology Council report.	_____
47 - 9	Littleton	Revise 2.303.008.	_____
48 - 9	Littleton	Revise 2.421.004.1.	_____
49 - 10	Littleton	Record in ROB the formation of a new Standard Project Committee titled "Laboratory Method of Test of Fault Detection and Diagnostics Applied Commercial Air-Cooled Packaged Systems."	_____
50 - 10	Littleton	Record in ROB the formation of a new Standard Project Committee titled "Method of Test for Determining Hydronic System Balance Valve Capacity."	_____
51 - 11	Jarnagin	Appoint a Board subcommittee to address registration fees for Board members' spouses and other related issues.	_____



## MINUTES

### BOARD OF DIRECTORS MEETING

Fairmont Queen Elizabeth Hotel  
Montreal, PQ, Canada  
June 29, 2011

MEMBERS PRESENT: Ronald E. Jarnagin, President  
Thomas E. Watson, President-Elect  
William P. Bahnfleth, Treasurer  
Constantinos A. Balaras, Vice President  
Ross D. Montgomery, Vice President  
T. David Underwood, Vice President  
Timothy G. Wentz, Vice President

Spencer Morasch, Region I DRC  
Isabelle Lavoie, Region II DRC  
Kevin W. Fallin, Region III DRC  
T. Randall Jones, Region IV DRC  
R. Lee Millies, Region V DRC  
Tina M. Brueckner, Region VI DRC  
Jeff W. Gatlin, Region VII DRC  
John L. Harrod, Region VIII DRC  
Richard J. Bowman, Region IX DRC  
Michael T. Burgess, Region X DRC  
Erich Binder, Region XI DRC  
William W. Malphus, Region XII DRC  
Wichai Laksanakorn, Region XIII DRC  
Askok K. Virmani, RAL DRC

Roberto R. Aguilo, DAL  
Michael J. Brandemuehl, DAL  
Hugh F. Crowther, DAL  
Patricia T. Graef, DAL  
Eckhard A. Groll, DAL  
Charles E. Gullede III, DAL  
Stephen D. Kennedy, DAL  
Samir R. Traboulsi, DAL  
Thomas E. Werkema, DAL

STAFF PRESENT: Jeff Littleton, Executive Vice President  
Gloria Cofer, Executive Assistant to Board of Directors  
Claire Neme, Administrative Assistant

#### GUESTS PRESENT:

Pat Kempf	Cindy Simmons	Fred Turner
Martha Van Geem	Carolyn Kettering	Vickie Grant
Don Surrena	Claire Ramspeck	Doug Read
Mike Beda	Stephanie Reiniche	Mark Ames
Chuck Foster	DD Latham	Joyce Abrams
Carol Marriott	Jodi Scott	Mike Vaughn
Michael Woodford	Bert Huffman	Ashley Pruett
Neil Leslie	Mark Owen	Steve Comstock

### CALL TO ORDER / ATTENDANCE / ANNOUNCEMENTS

After officially closing the 2011 ASHRAE Annual Meeting, President Ron Jarnagin called the first meeting of the 2011-12 Board of Directors to order at 2:00 p.m. on Wednesday, June 29, 2011. Members and guests attended as listed above.

Mr. Jarnagin requested that all guests sign a sheet being circulated for attendance purposes. He announced that the agenda for the meeting was distributed on memory sticks for Board members and guests to download.

**APPROVAL OF AGENDA**

There were no changes to the agenda.

**REPORT OF 2011 ANNUAL MEETING**

Attendance

Mr. Littleton reported a total of 1,567 registrants and 123 spouses for a total of 1,690 attending the 2011 Annual Meeting. He gave total count comparisons for the past three years, noting the number of registrants for the current meeting was larger than in any of the other years. A total of 250 participants registered for ALI courses. Bookstore sales totaled \$64,483, representing an increase of \$13,000+ in sales over the 2010 Annual Meeting sales.

Membership Ballot Voting Results (Attachment A)

Mr. Littleton announced that 4,050 ballots were returned, representing 9.04% of the 44,801 eligible voters. All officer and director nominees printed on the ballot were elected with no more than 15 negative votes being cast for any one position. He noted the complete voting results would be attached to these minutes (see Attachment A).

**CONSENT MOTIONS**

It was moved by Mr. Crowther

(1) that the following consent motions be approved:

- A. That King & Spalding be retained as ASHRAE legal counsel for fiscal year 2011-2012. AI 1
- B. That Lesesne Capital Management, Inc. be approved as ASHAE investment advisor for fiscal year 2011-2012. AI 2
- C. That Jones & Kolb be approved as Certified Public Accountant for ASHRAE for fiscal year 2011-2012. AI 3
- D. That the appropriate and required bank resolutions for institutions in which ASHRAE funds are deposited as executed by officers for 2011-2012 be approved.

**MOTION 1 PASSED.** (Unanimous voice vote, chair not voting.)

**CONFIRMATION OF 2011-2012 APPOINTMENTS**

Waiver of Rules for Standing Committee Appointments

It was moved by Mr. Crowther

(2) that the rules be waived to allow appointment of a member, rather than the president, of ASHRAE Research Canada as a consultant to the Research Promotion Committee.

**MOTION 2 PASSED.** (Unanimous voice vote, chair not voting.)

2011-2012 Standing Committee Appointments (Attachment B)

It was moved by Mr. Crowther

- (3) that appointments to standing committees for 2011-2012 as shown in Attachment B be approved, including the following additional changes:
- Decline of Guy Perreault to serve on Planning Committee
  - Decline of Emil E. Friberg to serve on Professional Development Committee

**MOTION 3 PASSED.** Unanimous voice vote, chair not voting.

Other Appointments

Mr. Jarnagin indicated that he planned to complete appointments to other Society positions, ad hoc committees and intersociety representatives by the July 21 Board conference call meeting.

**EXECUTIVE COMMITTEE REPORT (Attachment C)**

It was moved by Mr. Jarnagin

- (4) that the Scholarship Program Guidelines be amended as follows:

General Guidelines:

- 2.8 No preference shall be given by the Scholarship Trustees to any candidate ~~who is or has been, or whose relative is, or has been, a member of ASHRAE, the Board of Directors and/or the Scholarship Trustees. No candidate shall be allowed to indicate any relative's activities in ASHRAE on the scholarship application form. At the discretion of the Scholarship Trustees, any such indication may result in the disqualification of the candidate's scholarship application form from further consideration.~~

He indicated the changes focused on no preference being given to a candidate because of a relative's role in ASHRAE.

**MOTION 4 PASSED.** Unanimous voice vote, chair not voting.

AI 4

**STANDARD 90.2 AS A LEADERSHIP STANDARD**

Mr. Jarnagin recognized Mr. Montgomery, who presented the following motion for Board consideration:

- (5) that Technology Council provide guidance to the Standards Committee and SSPC 90.2 to position Standard 90.2 as a leadership standard.

Mr. Montgomery pointed out that Standard 90.2 was originally conceived as a minimum standard for energy efficiency in low-rise residential buildings but has not been mandated as the benchmark for residential energy codes and has struggled for relevance. In 2008 an ad hoc committee reviewed the status of the standard with a view of possibly recommending withdrawal; however, it decided that a better option would be to determine how to improve the standard. In addition, the ad hoc committee agreed that SSPC 90.2 could not continue to work

in its current mode. There were concerns that SSPC 90.2 was writing a standard that did not achieve high enough stringency levels relative to the IECC.

In accordance with Board guidance in 2009, a work plan was adopted based on the ad hoc committee's recommendation that addressed creating a standard that achieved specified energy efficiency levels. A revised Standard 90.2 was sent out for Advisory Public Review in spring 2011 resulting in many comments critical of the low stringency level of the standard relative to impacting the residential market. These were indicative that SSPC 90.2 had not achieved the intent of the 2009 ad hoc committee's recommendations. Mr. Montgomery indicated the motion being presented would provide the direction necessary to begin establishing goals to achieve those recommendations.

Dr. Bahnfleth noted this motion would be considered a directive from the Board to set a strategic position. SSPC 90.2 considers that they are meeting requirements set by the Board in 2009 and they have requested further direction from the Board if the energy efficiency stringency level should be increased. He added that DOE financial support should not affect the Board's decision since DOE is providing support for both 90.1 and 90.2.

Mr. Underwood spoke in support of the motion based on its alignment with Strategic Plan direction 1 and on the importance of ASHRAE having a viable residential energy standard.

Mr. Montgomery pointed out that if the motion was approved recommendations from Technology Council would come back to the Board for approval.

**MOTION 5 PASSED.** (Unanimous voice vote, chair not voting)

**MEMBERS COUNCIL REPORT** (Attachment D)

It was moved by Mr. Watson

- (6) that the structure of Members Council be revised to remove DRCs from the council and replace them with qualified appointed representatives from each region.

Mr. Watson called attention to background item 6 indicating that the DRC would continue to be fully responsible for all regional operations but the structure change would allow flexibility in assignments to assistant regional chair and Members Council representative. He also indicated the motion was being submitted at this meeting as the 60-day notice of intent to propose this motion for a major organizational change at the next Board meeting.

Mr. Traboulsi suggested that the DRC/ARC section of the background be part of the motion and questioned whether the fiscal impact of \$28,000 was realistic. He also suggested that the fiscal impact should be shown with a subtotal for each year in the three-year term. It was noted if the motion was approved these details would be included in the implementation plan. Mr. Jones explained that the fiscal estimates would cover one additional person per region to attend Members Council meetings.

Responding to Mr. Virmani's question about the DRC's limit on delegation, Mr. Jones indicated the DRC could delegate all of his responsibilities except his role on the Board.

Mr. Montgomery stated the requirement that the DRC is the region's leader must be retained in the motion.

Mr. Malphus noted the importance of providing training for incoming DRCs and ARCs especially if both are incoming in the same year.

It was moved by Mr. Crowther

(6A) that motion 6 be postponed to the fall 2011 Board meeting.

**MOTION 6A (TO POSTPONE) PASSED.** (Unanimous voice vote, chair not voting)

**PUBLISHING AND EDUCATION COUNCIL REPORT** (Attachment E)

It was moved by Mr. Underwood

(7) that ROB 1.201.002, ASHRAE Units Policy, be reaffirmed.

**MOTION 7 PASSED.** (Unanimous voice vote, chair not voting)

AI 5

**TECHNOLOGY COUNCIL REPORT** (Attachment F)

Mr. Montgomery referred to the introductory note in the council report regarding motions to be presented for publication of standards:

**[NOTE:** A summary of any unresolved commenters and negative project committee voters on the following publication drafts is included in the background to each motion. More information is available on the analysis sheets that were distributed prior to the meeting.

By default, all publication drafts will be processed by our ANSI Audited Designator procedures unless otherwise indicated by the Board. The procedures no longer require Technology Council approval for publication votes, so the vote shown with the motion is the Standards Committee vote. In all cases, the fiscal impact for publication drafts is within existing budgets.]

Mr. Montgomery moved

(8) that consent motions 1-22 of the Technology Council report be approved:

1. that BSR/ASHRAE Standard 32.2-2003 (RA 2011), *Methods of Testing for Rating Pre-Mix and Post-Mix Beverage Dispensing Equipment*, be approved for publication. AI 6
2. that BSR/ASHRAE Addendum *i* (adds new refrigerant 1234ze (E) to Tables 1, *Refrigerant Data and Safety Classifications* and D1, *Refrigerant Data*) to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, be approved for immediate publication. AI 7
3. that BSR/ASHRAE Addendum *j* (adds new azeotropic refrigerant 511A to Table 2, *Data and Safety Classifications for Refrigerant Blends* and Table D2, *Data for Refrigerant Blends*) to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, be approved for immediate publication. AI 8
4. that BSR/ASHRAE Addendum *k* (deletes the provisional status of refrigerant concentration limit (RCL) values for refrigerants 14, 115, 170, C318, 1270, 405A, 416A, 417A, 424A, 426A, and 504) to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, be approved for immediate publication. AI 9
5. that BSR/ASHRAE Addendum *l* (changes the cardiac sensitization no observed effect level (NOEL) values and deletes the lowest observed effect level (LOEL) value for R-32) to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, be approved for immediate publication. AI 10

6. that BSR/ASHRAE Addendum *n* (requires refrigerant applicants to provide 'pressure at the critical point' data) to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, be approved for immediate publication. AI 11
7. that BSR/ASHRAE Addendum *o* (clarifies the requirements of clause B1, *Flammability Testing*) to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, be approved for immediate publication. AI 12
8. that BSR/ASHRAE Addendum *a* (clarifies Figures 5.2.3.2 and 5.3 by providing numerical adjustment factors and equations) to ANSI/ASHRAE Standard 55-2010, *Thermal Environmental Conditions for Human Occupancy*, be approved for publication. AI 13
9. that BSR/ASHRAE Addendum *d* (adds an alternative exhaust rate design procedure that provides the designer with a performance path) to ANSI/ASHRAE Standard 62.1-2010, *Ventilation for Acceptable Indoor Air Quality*, be approved for publication. AI 14
10. that BSR/ASHRAE Addendum *e* (clarifies requirements for system control needed to assure proper ventilation rates) to ANSI/ASHRAE Standard 62.1-2010, *Ventilation for Acceptable Indoor Air Quality*, be approved for publication. AI 15
11. that BSR/ASHRAE/IES Addendum *b* (permits automatic stopping and starting of escalators or moving walks) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication. AI 16
12. that BSR/ASHRAE/IES Addendum *c* (clarifies use of an outdoor air bypass damper that ensures a constant volume stack discharge as the baseline approach) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication. AI 17
13. that BSR/ASHRAE/IES Addendum *g* (adds Table 6.8.1L defining minimum efficiency requirements for commercial refrigerators and freezers) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication. AI 18
14. that BSR/ASHRAE/IES Addendum *h* (amends the minimum energy efficiency standards for water-to-air heat pumps listed in Table 6.8.1B, *Electrically Operated Unitary and Applied Heat Pumps – Minimum Efficiency Requirements*) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication. AI 19
15. that BSR/ASHRAE/IES Addendum *j* (corrects EER values in table 6.8.1A, *Electrically Operated Unitary Air Conditioners and Condensing Units- Minimum Efficiency Requirements*) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication. AI 20
16. that BSR/ASHRAE/IES Addendum *k* (makes transformer test procedures references consistent with references in Chapter 6) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication. AI 21
17. that BSR/ASHRAE/IES Addendum *ci* (cooling tower fans) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication. AI 22
18. that BSR/ASHRAE/IES Addendum *ds* (*corrects daylighting definitions*) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication. AI 23
19. that BSR/ASHRAE Addendum *ad* (fixes miscellaneous problems in the standard such as allowing Feedback\_Value to be used to calculate Elapsed\_Active\_Time, adds conditions to Read-Property and increases the segmentation window size for MS/TO) to ANSI/ASHRAE Standard 135-2010, *BACnet®—A Data Communication Protocol for Building Automation and Control Networks*, be approved for publication. AI 24
20. that BSR/ASHRAE Addendum *ae* (adds and clarifies authentication coding and access properties) to ANSI/ASHRAE Standard 135-2010, *BACnet®—A Data Communication Protocol for Building Automation and Control Networks*, be approved for publication. AI 25
21. that BSR/ASHRAE Addendum *af* (modifies events and alarms) to ANSI/ASHRAE Standard 135-2010, *BACnet®—A Data Communication Protocol for Building Automation and Control Networks*, be approved for publication. AI 26
22. that BSR/ASHRAE Standard 158.2-2006R, *Methods of Testing Capacity of Refrigerant Pressure Regulators*, be approved for publication. AI 27

Mr. Werkema reported a conflict of interest in that his employer was a refrigerant manufacturer.

**MOTION 8 PASSED.** (Vote: 28-0-1, chair not voting)

Mr. Montgomery moved

(9) that consent motions 23-29 of the Technology Council report be approved:

- |   |       |
|---|-------|
| 23. that BSR/ASHRAE/USGBC/IES Addendum <i>c</i> (groups outdoor air definitions for easier reference) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, <i>Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings</i> , be approved for publication.   | AI 28 |
| 24. that BSR/ASHRAE/USGBC/IES Addendum <i>d</i> (updates the reference to CDPH/EHLB/Standard Method V1.1) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, <i>Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings</i> , be approved for publication.   | AI 29 |
| 25. that BSR/ASHRAE /USGBC/IES Addendum <i>e</i> (clarifies the requirements of E1.1, IAQ Limit Requirements) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, <i>Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings</i> , be approved for publication.   | AI 30 |
| 26. that BSR/ASHRAE /USGBC/IES Addendum <i>h</i> (proposes to update Section 7.4.3, <i>Heating, Ventilating, and Air Conditioning</i> ) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, <i>Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings</i> , be approved for publication.                                 | AI 31 |
| 27. that BSR/ASHRAE /USGBC/IES Addendum <i>j</i> (updates Section 7.5, <i>Energy Performance Path</i> and Appendix D, <i>Performance Option for Energy Efficiency</i> ) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, <i>Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings</i> , be approved for publication. | AI 32 |
| 28. that BSR/ASHRAE /USGBC/IES Addendum <i>k</i> (adds requirement related to invasive plants and tree growth) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, <i>Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings</i> , be approved for publication.  | AI 33 |
| 29. that BSR/ASHRAE/USGBC/IES Addendum <i>o</i> (adds requirements for pedestrian friendly walkways) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, <i>Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings</i> , be approved for publication.  | AI 34 |

**MOTION 9 PASSED.** (Vote: 28-0-1, chair not voting. Mr. Kennedy abstained because he was a member of the project committee for Standard 189.1.)

Mr. Montgomery moved that consent motions 30-36 be approved. Motions 30, 35 and 36 were removed from the consent list for separate.

(10) that consent motions 31-34 of the Technology Council report be approved:

- |   |       |
|---|-------|
| 31. that BSR/ASHRAE Addendum <i>i</i> (provides an infiltration rate for the methodology for intermittent ventilation) to ANSI/ASHRAE Standard 62.2-2010, <i>Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings</i> , be approved for publication. | AI 35 |
| 32. that BSR/ASHRAE Addendum <i>l</i> (provides requirements for installation of a carbon monoxide alarm) to ANSI/ASHRAE Standard 62.2-2010, <i>Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings</i> , be approved for publication.              | AI 36 |
| 33. that BSR/ASHRAE Standard 145.2P, <i>Laboratory Test Method for Assessing the Performance of Gas-Phase Air Cleaning Systems: Air Cleaning Devices</i> , be approved for publication.   | AI 37 |

- 34. that BSR/ASHRAE/ASHE Addendum *h* (clarifies the use of recirculating units through modifications to four parts of the standard) to ANSI/ASHRAE/ASHE Standard 170-2008, *Ventilation of Health Care Facilities*, be approved for publication.

AI 38

**MOTION 10 PASSED.** (Unanimous voice vote)

Mr. Montgomery moved

- (11) that consent motions 35-36 of the Technology Council report be approved:

- 35. that BSR/ASHRAE/USGBC/IES Addendum *f* (changes to the renewable energy requirements in Standard 189.1-2009) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.
- 36. that BSR/ASHRAE/USGBC/IES Addendum *l* (improves clarity related to heat island reduction provisions) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.

AI 39

AI 40

**MOTION 11 PASSED.** (Vote: 28-0-1, chair not voting. Mr. Kennedy abstained because he was a member of the project committee for Standard 189.1.)

Mr. Montgomery moved

- (12) that consent motion 30 of the Technology Council report be approved:

- 30. that BSR/ASHRAE Addendum *c* (changes the OEL for R-1234yf from 400 to 500 to be consistent with the AIHA workplace environmental exposure level (WEEL) value) to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, be approved for immediate publication.

Mr. Montgomery reported there was one unresolved commenter and no negative votes by members of the project committee. Those who abstained from voting were members of the project committee for SSPC 34.

**MOTION 12 PASSED.** (Unanimous voice vote, chair not voting)

AI 41

Mr. Montgomery moved

- (13) that consent motions 37-45 of the Technology Council report be approved:

- 37. that the *Procedures for ASHRAE Guidelines Actions (PAGA)* be withdrawn and Rules of the Board (ROB) 2.425.003.1, *General Requirements*, ROB 2.425.003.3, ROB 2.425.003.6 and ROB 2.425.004 be approved as shown in Appendix OS-A [of Technology Council report].
- 38. that Rules of the Board 2.425.001, *Scope and Purpose* be approved as shown in Appendix OS-B [of Technology Council report].
- 39. that Rules of the Board (ROB), Volume 2: Standing Rules – General Rules, Board, Council and Committees, be modified as indicated below.  
 VOLUME 2 - RESEARCH ADMINISTRATION COMMITTEE  
 2.421.004.7 Awards (07-06-27-33)
  - A. This committee shall select one student from an eligible institution as the recipient of the annual Homer Addams Award in accordance with the ROB and RAC MOP. (64-06-28-44/71-08-25-14/83-06-26/92-01-30-61/99-01-28-66)
  - B. This committee shall select the annual recipient of the Service to ASHRAE Research Award in accordance with the ROB and RAC MOP.

AI 42

AI 43

AI 44

- C. This committee shall implement the annual grant-in-aid program in accordance with the ROB and RAC MOP.
- D. This committee shall have the option of selecting annually the recipient of an annual ASHRAE New Investigator Award to (a) enhance the academic careers of recent Ph.D. recipients, (b) promote research related to the goals of ASHRAE in universities and colleges, and (c) promote educational efforts related to the goals of ASHRAE. (520-162-013) (99-01-28-66)
- E. This committee shall have the option of selecting up to ten grant recipients of the ASHRAE Research - International Dissemination Travel Grant Program annually in accordance with the ROB, RAC MOP and RAC Reference Manual.
- F. This committee shall have the option of selecting annual recipients of ASHRAE Annual Innovation Research Grants in accordance with the ROB, RAC MOP and RAC Reference Manual.
40. that ROB Volume 2: Standing Rules – General Rules, Board, Council and Committees, be modified as indicated below. AI 45
- RESEARCH ADMINISTRATION COMMITTEE  
2.421.006 MANUALS AND PROCEDURES  
2.421.006.1 This committee is responsible for reviewing, recommending changes and interpreting the following:
- A. Model Research Agreement  
B. Recommended Qualifications for new RAC Members  
C. Research Strategic Plan
41. that ROB Volume 2: Standing Rules – General Rules, Board, Council and Committees, and Volume 3: Manual of Procedures for Officers and Directors of the Rules of the Board, be modified as indicated in Appendix OS-C [of Technology Council report]. AI 46
42. that ROB Volume 2: Standing Rules – General Rules, Board, Council and Committees, be modified as indicated below. AI 47
- 2.303.002 Research Agreement**  
This council monitors, approves and maintains the —Model Research Agreement
- 2.303.008 Policies, Manuals and Procedures**  
This council is responsible for reviewing, recommending changes and interpreting the following:
- Standards Development Policy  
Procedures for ASHRAE Standards Actions (PASA)  
Procedures for ASHRAE Guidelines Actions (PAGA)  
Procedures for Developing ASHRAE Position Documents and Position Statements  
Guidelines for Developing ASHRAE Position Briefs  
All Position Documents and Position Statements  
~~Model Research Agreement~~
43. that ROB Volume 2: Standing Rules – General Rules, Board, Council and Committees be modified as indicated below. AI 48
- RESEARCH ADMINISTRATION COMMITTEE  
2.421.004 OPERATION  
2.421.004.1 General Requirements
- D. This committee shall cooperate with the Technical Committees, Task Groups, Multidisciplinary Task Groups w/research authority, Environmental Health Committee, Refrigeration Committee, and Standing Standards Project Committees to plan, develop, contract, monitor and disseminate the results of research and technical projects in accordance with RAC guides. The Technical Committees, Task Groups, Multidisciplinary Task Groups w/research authority, Environmental Health Committee, Refrigeration Committee, and Standing Standards Project Committees shall be responsible for the technical content of the projects. This committee shall review and monitor the work of the Technical Committees, ~~and Task Groups,~~ Multidisciplinary Task Groups w/research authority, Environmental Health Committee, Refrigeration Committee, and Standing Standards Project Committees to ensure that said projects are consistent with the Society’s research objectives and that ASHRAE procedures have been followed. (99-01-28-65/07-06-27-30)

44. that the following Title, Purpose and Scope (TPS) be approved and that a new Standard Project Committee be formed:  
**TITLE:** Laboratory Method of Test of Fault Detection and Diagnostics Applied Commercial Air-Cooled Packaged Systems

AI 49

**PURPOSE:**

This standard provides a method to define an FDD tool's function. This standard also provides a method of laboratory test for the performance of Fault Detection and Diagnostic (FDD) tools on commercial air-cooled packaged equipment.

**SCOPE:**

2.1 This standard applies to commercial air-cooled packaged air conditioning systems.

2.2 The test is a physical laboratory test on a particular combination of diagnostic tool for each model of a unitary system.

2.3 This standard applies to any on-board, after-market or hand-held hardware and/or software functionality that detects and/or diagnoses problems that lead to degraded performance such as, energy efficiency, capacity, increased maintenance costs or shortened equipment life.

45. that the following Title, Purpose and Scope (TPS) be approved and that a new Standard Project Committee be formed:

AI 50

**TITLE:** Method of Test for Determining Hydronic System Balance Valve Capacity

**PURPOSE:** This standard provides standard capacity test procedures, definitions and requirements for valve calibration, and reporting of operational characteristics.

**SCOPE:** This standard applies to manual and automatic balancing valves utilized in hydronic HVAC and building plumbing systems. This standard also applies to pressure independent control valves and actuated and non-actuated valves.

**COMMITTEE REPORTS**

Advocacy Committee (Attachment G)

Mr. Watson referred to information items on (1) ASHRAE leading a coalition to support continued work on CBECS and (2) ASHRAE's work with several states on issues related to building energy codes.

Society Rules Committee (Attachment H)

Mr. Werkema referred to information items in the SRC report and highlighted the log of editorial changes SRC had made to the ROB.

**NEW BUSINESS**

Conflict of Interest Disclosure Statement

Mr. Littleton reminded all Board members to return their signed Conflict of Interest disclosure statements by Friday, July 29. He indicated this was required by the U.S. government.

**NEXT MEETING**

Mr. Jarnagin announced the next Board meeting would be held via conference call on Thursday, July 21, 9-11 a.m. for the purpose of hearing information reports from councils and from committees reporting to the Board.

He also announced the next in-person meeting would be held on November 4-5 at Headquarters in Atlanta, GA, beginning at 8 am on November 4 and ending by 2 pm on November 5. (Secretary's note: The ending time of this meeting was later **changed to noon on November 5.**)

**SOCIETY MEETING REGISTRATION FEES**

Mr. Fallin moved

- (14) that BOD members be charged a nominal registration fee to attend Society meetings at the same discounted rate as speakers.

Mr. Fallin noted the Board had passed motions on Sunday, June 26, requiring other designated groups who currently do not pay a registration fee, such as speakers and CEC members, to pay a discounted registration fee and the same requirement should apply to Board members as Society leaders.

Dr. Bahnfleth moved a substitute motion as follows:

- (14A) that BOD members be charged a registration fee at a discounted rate of 25% of the full member registration fee rounded up to the nearest \$5.00 to attend winter and annual meetings effective with the 2013 winter meeting.

Mr. Gulledge stated that equitable cost was not an issue and questioned if the membership should be notified about this. A question was also raised as to whether charging the registration fee also applied to Board members' spouses.

It was moved by Mr. Gulledge

- (14B) that the motion be referred to a committee of 4-5 Board members to develop details to report back to the Board no later than the fall 2011 Board meeting.

**MOTION 14B (TO REFER) FAILED.** (Voice vote, chair not voting)

Mr. Fallin moved a substitute motion as follows:

- (14C) that Board of Directors members be charged a registration fee calculated by applying a 75% discount to the member full registration fee rounded up to the nearest \$5.00 for Winter and Annual Meetings, beginning with the Winter Meeting in 2013.

Mr. Littleton suggested that the registration fee for Board members' spouses should also be addressed. Mr. Jarnagin indicated if the motion passed he would appoint a Board subcommittee to address this and other related issues.

**MOTION 14C PASSED.** (Vote: 28-1-0, chair not voting)

**ANNOUNCEMENTS**

Dr. Bahnfleth announced that copies of the Call for Papers for CLIMA 2013 were available to Board members.

Mr. Jarnagin announced that Board hospitality would be held 4:45-6:00 p.m. following this meeting.

**ADJOURNMENT**

The meeting was adjourned at 3:37 p.m.

A handwritten signature in black ink, appearing to read 'J. Littleton', with a horizontal line extending to the right from the end of the signature.

Jeff H. Littleton, Secretary

gfc/2011-08-19

Distribution: Board of Directors  
Staff Directors

Attachments: A. Membership Ballot Voting Results  
B. 2011-12 Standing Committee Appointments  
C. ExCom Report – Meeting of June 29, 2011  
D. Members Council Report  
E. Publishing and Education Council Report  
F. Technology Council Report  
G. Advocacy Committee Report  
H. Society Rules Committee Report



## ***2011 ASHRAE Membership Ballot Summary Results***

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TO: Jeff Littleton

FROM: Ashley Pruett

DATE: June 26, 2011

RE: Summary of 2011 membership ballot results

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The 2011 ASHRAE membership ballot consisted of the election of officers and directors for 2011-12.

### **I. OVERALL VOTING SUMMARY**

- a. Eligible voters = 44,801
- b. Votes received = **4,050**
- c. Percentage of votes received = **9.04%** compared to 10.52% last year

### **II. OFFICERS AND DIRECTORS**

Nominations for officers and directors are made by the Nominating Committee from a list recommended by individual members and from the Chapters Regional Conference meetings. Additionally, any voting member of the Society may write in the name of an individual for any office. The following candidates received majority votes for the offices to which they were nominated:

- President Elect, Thomas E. Watson
- Treasurer, William P. Bahnfleth
- Vice President, Constantinos A. Balaras
- Vice President, Ross D. Montgomery
- Vice President, T. David Underwood
- Vice President, Timothy G. Wentz
- Region VII Director and Regional Chair, Jeffry W. Gatlin
- Region VIII Director and Regional Chair, John L. Harrod
- Region IX Director and Regional Chair, Richard J. Bowman
- Region X Director and Regional Chair, Michael T. Burgess
- Region-at-Large Director and Regional Chair, Ashok K. Virmani
- Director at Large, Roberto R. Aguilo
- Director at Large, Patricia T. Graef
- Director at Large, Stephen D. Kennedy

### III. PROXIES

*The ballot is conducted by an outside audited ballot agency. ASHRAE staff assists in the coordination of the ballot, and ASHRAE Members are appointed as proxies to authorize the validity of the results. Members wishing to cast their ballot must vote on both proxy statements.*

1. I, the undersigned, a voting grade member of ASHRAE, do hereby appoint Isabelle Lavoie, Russell Lavitt or Richie Mittal, or any one or more of them as my proxy to vote on my behalf and in my place and stead, as fully as I could do in person, upon the above votes by casting for me a ballot in the form of the completed online ballot (any returned print ballots will be checked for validity, entered electronically, and filed at ASHRAE for one (1) year), at the 2011 Annual Conference of the Society to be held in Montreal, PQ, Canada, commencing at 3:15 P.M. on Saturday, June 25, 2011. If you vote “No” on this statement, you are rendering this ballot invalid, and you must vote in person at the June 2011 Annual Conference if you wish your votes to be counted.

Votes		% vote share
3,985	Yes	100%
0	No	0%

2. The above proxies are hereby authorized to vote on my behalf on any other matter that may properly come before said Annual Conference.

Votes		% vote share
3,805	Yes	95.5%
180	No	4.5%

**2011 ASHRAE Society Ballot  
Election Summary**

<b>Total Eligible:</b>	<b>44,801</b>
<b>Total Ballots Cast:</b>	<b>4,050</b>
<b>Percent of Eligible:</b>	<b>9.04%</b>

ASHRAE personnel were supplied the member login codes.

\_\_\_\_\_  
John Mulcahy, Director of Operations

June 26, 2011  
\_\_\_\_\_  
Date

(Notarized version forthcoming)  
\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
Date

## 2011 ASHRAE Society Ballot

### Official Results

#### President-Elect

<b>Vote for: 1</b>	<b>Votes</b>	<b>Percent</b>
Thomas E. Watson (Term: June 2011 to June 2012)	3,793	99.0% *
Write-in (other than above)	39	1.0%
Total Valid Ballots:	3,832	
Total Unexercised:	218	
Total Ballots Cast:	4,050	

#### Treasurer

<b>Vote for: 1</b>	<b>Votes</b>	<b>Percent</b>
William P. Bahnfleth (Term: June 2011 to June 2012)	3,813	99.6% *
Write-in (other than above)	15	0.4%
Total Valid Ballots:	3,828	
Total Unexercised:	222	
Total Ballots Cast:	4,050	

#### Vice President

<b>Vote for: 1</b>	<b>Votes</b>	<b>Percent</b>
Constantinos A. Balaras (Term: June 2011 to June 2012)	3,421	99.4% *
Write-in (other than above)	22	0.6%
Total Valid Ballots:	3,443	
Total Unexercised:	607	
Total Ballots Cast:	4,050	

**Vice President**

<b>Vote for: 1</b>	<b>Votes</b>	<b>Percent</b>
Ross D. Montgomery (Term: June 2011 to June 2012)	3,460	99.7% *
Write-in (other than above)	10	0.3%
Total Valid Ballots:	3,470	
Total Unexercised:	580	
Total Ballots Cast:	4,050	

**Vice President**

<b>Vote for: 1</b>	<b>Votes</b>	<b>Percent</b>
T. David Underwood (Term: June 2011 to June 2012)	3,437	99.7% *
Write-in (other than above)	11	0.3%
Total Valid Ballots:	3,448	
Total Unexercised:	602	
Total Ballots Cast:	4,050	

**Vice President**

<b>Vote for: 1</b>	<b>Votes</b>	<b>Percent</b>
Timothy G. Wentz (Term: June 2011 to June 2012)	3,426	99.6% *
Write-in (other than above)	14	0.4%
Total Valid Ballots:	3,440	
Total Unexercised:	610	
Total Ballots Cast:	4,050	

**Director-at-Large****Vote for: 1**

	<b>Votes</b>	<b>Percent</b>
Roberto R. Aguilo (Term: June 2011 to June 2014)	3,369	99.6% *
Write-in (other than above)	13	0.4%
Total Valid Ballots:	3,382	
Total Unexercised:	668	
Total Ballots Cast:	4,050	

**Director-at-Large****Vote for: 1**

	<b>Votes</b>	<b>Percent</b>
Patricia T. Graef (Term: June 2011 to June 2014)	3,508	99.7% *
Write-in (other than above)	11	0.3%
Total Valid Ballots:	3,519	
Total Unexercised:	531	
Total Ballots Cast:	4,050	

**Director-at-Large****Vote for: 1**

	<b>Votes</b>	<b>Percent</b>
Stephen D. Kennedy (Term: June 2011 to June 2014)	3,437	99.7% *
Write-in (other than above)	12	0.3%
Total Valid Ballots:	3,449	
Total Unexercised:	601	
Total Ballots Cast:	4,050	

### Region VII Director & Regional Chair

<b>Vote for: 1</b>	<b>Votes</b>	<b>Percent</b>
Jeffry W. Gatlin (Term: June 2011 to June 2014)	3,490	99.7% *
Write-in (other than above)	10	0.3%
Total Valid Ballots:	3,500	
Total Unexercised:	550	
Total Ballots Cast:	4,050	

### Region VIII Director & Regional Chair

<b>Vote for: 1</b>	<b>Votes</b>	<b>Percent</b>
John L. Harrod (Term: June 2011 to June 2014)	3,504	99.9% *
Write-in (other than above)	4	0.1%
Total Valid Ballots:	3,508	
Total Unexercised:	542	
Total Ballots Cast:	4,050	

### Region IX Director and Regional Chair

<b>Vote for: 1</b>	<b>Votes</b>	<b>Percent</b>
Richard J. Bowman (Term: June 2011 to June 2014)	3,499	99.8% *
Write-in (other than above)	6	0.2%
Total Valid Ballots:	3,505	
Total Unexercised:	545	
Total Ballots Cast:	4,050	

### Region X Director & Regional Chair

<b>Vote for: 1</b>	<b>Votes</b>	<b>Percent</b>
Michael T. Burgess (Term: June 2011 to June 2014)	3,510	99.8% *
Write-in (other than above)	6	0.2%
Total Valid Ballots:	3,516	
Total Unexercised:	534	
Total Ballots Cast:	4,050	

### Region-at-Large Director & Regional Chair

<b>Vote for: 1</b>	<b>Votes</b>	<b>Percent</b>
Ashok K. Virmani (Term: June 2011 to June 2014)	3,563	99.7% *
Write-in (other than above)	11	0.3%
Total Valid Ballots:	3,574	
Total Unexercised:	476	
Total Ballots Cast:	4,050	

### Proxy Appointment

<b>Vote for: 1</b>	<b>Votes</b>	<b>Percent</b>
Yes	3,985	100.0% *
No	0	0.0%
Total Valid Ballots:	3,985	
Total Unexercised:	65	
Total Ballots Cast:	4,050	

## Proxy Authorization

Vote for: 1

	Votes	Percent
Yes	3,805	95.5% *
No	180	4.5%

Total Valid Ballots:	3,985
Total Unexercised:	65
Total Ballots Cast:	4,050

## President-Elect

### Write-ins:

Against  
Arshad Sheikh Pakistan  
Bjarne Olesen  
carl ian graham  
Dave Zimmerman  
David Scott Fisher  
Doug McLellan  
Hugh McMillian  
Jack Zarour  
James Wolff Ex Trane worked with EPA  
Jeremy Knowles  
Jeremy M. Knowles  
Jim Fields Jr.  
Jose Philip  
Kevin Marple  
Lynn Bellenger  
Mark Donnelly  
Mick Schwedler  
Mike Thompson  
other than above  
Paul Almond  
Paul Draper  
Phil Stafa, PE  
Randy Newton  
Roberto R. Aguilo  
Ron Hamski  
Ron Howell  
Ronald Jarnagin  
Ross Montgomery  
Roy Hubbard  
Steven Taylor  
Steven Taylor  
Thimothy G. Wentz  
Timothy G. Wentz  
Todd Jedrzejczyk  
Tom Easter  
Wade Conlan

William E Durham  
William P. Bahnfleth

**Treasurer**

**Write-ins:**

Against  
Andy Persily  
B. Andrew Price  
Jeffrey W. Gatlin  
Krunal M. Patel  
Paul Almond  
Paul Draper  
paul wood  
Peter Combs  
Rick Hermans  
Robert Wajda  
Steve Ford  
Sui-Fan Tang  
Thomas Phoenix  
Wade Conlan

## **Vice President**

### **Write-ins:**

Against  
Andrew Lang  
Chris Salgado  
Chuck Dunn  
d  
Dale R Heiring  
Dale R. Heiring  
Eli Howard  
Ioannis Askitopoulos  
Jay Santos  
Jim Fields  
Justin P Carlson  
Mark MacCracken  
Paul Almond  
Paul Bauman  
Paul Draper  
Robert Alan Neely  
Robert Hu  
Sheila J. Hayter  
Tim Dwyer  
Tom Pheonix  
Wade Conlan

## **Vice President**

### **Write-ins:**

Bryan Tedesco  
Chuck Dunn  
Gary Cooper  
Mick Schwedler  
Paul Almond  
Paul Draper  
Rex Nobel  
Timothy White  
Wade Conlan  
William S. Holloway

## **Vice President**

### **Write-ins:**

Against  
Fred Bauman  
Patricia G. Kempf  
Paul Almond  
Paul Draper  
Paul Khalife  
Steve Alvine  
Wade Conlan  
William P. Bahnfleth  
William S Holloway  
Wilson H. Dent

## **Vice President**

### **Write-ins:**

Against  
c  
Chuck Dunn  
Dale R Heiring  
David Dowell  
Glenn Hourahan  
James A. Kasulka  
Kenny Lewis  
Michael J. Brandemuehl  
Michael N Hart  
Paul Almond  
Paul Draper  
Thomas E. Watson  
Wade Conlan

## **Director-at-Large**

### **Write-ins:**

Against

Anyone who understands that volcanoes are more thr

b

Branko Todorovic

Chuck Dunn

Constantinos A. Balaras

Damian Serauskas

Mark Donnelly

Paul Almond

Paul Draper

Wade Conlan

William A. Nottingham III

Wilson H Dent

## **Director-at-Large**

### **Write-ins:**

a

Billy Austin

Daniel A Nye

Joe Pacey

Neil S. Wyche

Paul Almond

Paul Draper

Randy Sikkema

Steven Taylor

Wade Conlan

Wilson H dent

## **Director-at-Large**

### **Write-ins:**

Against  
Chuck Dunn  
Donald Duck  
Jim Boyd  
Michael Hart  
Pamela Androff  
Paul Almond  
Paul Draper  
Samir Traboulsi  
Srinivas Garimella  
Wade Conlan  
Wilson H. Dent

## **Region VII Director & Regional Chair**

### **Write-ins:**

Frank Schambach  
Greg S. Spagnolo  
Jeremy M. Knowles  
Krunal Patel  
Paul Almond  
Paul Draper  
Timothy Dwyer  
Wade Conlan  
Walter Law  
William Smith

## **Region VIII Director & Regional Chair**

### **Write-ins:**

Dale R. Heiring  
Paul Almond  
Paul Draper  
Wade Conlan

## **Region IX Director and Regional Chair**

### **Write-ins:**

Daniel Koenigshofer  
Paul Almond  
Paul Draper  
Thomas G. Lewis  
Wade Conlan  
William S. Holloway

## **Region X Director & Regional Chair**

### **Write-ins:**

Joseph Stalin  
Joseph Ting  
Krunal M. Patel  
Paul Almond  
Paul Draper  
Wade Conlan

## **Region-at-Large Director & Regional Chair**

### **Write-ins:**

2  
Arshad Sheik Pakistan  
Ashish Rakheja  
Jeremy M. Knowles  
KPS RAMESH  
Mahmoud Fouad  
other than above  
Paul Almond  
Paul Draper  
Udayan Choudhari  
Wade Conlan

## **2011-2012 Committee Appointments**

(Changes made between April 26 and June 16 are marked using *Track Changes*)

### **Committees Reporting to Board of Directors**

#### **Advocacy Committee**

Thomas E. Watson, Chm/CO  
William P. Bahnfleth, VC\*  
Steven H. Bernhardt  
Darryl K. Boyce  
Richard A. Charles  
Robert G. Craddock  
Harvey M. Sachs  
Scott E. Wayland\*

#### **Society Rules Committee**

Patricia T. Graef, Chm\*  
Steven T. Bushby, VC  
Michael J. Brandemuehl  
Arthur L. Giesler  
Max H. Sherman  
Jack H. Zarour  
T. David Underwood, CO\*  
Gloria F. Cofer, NVM

#### **Finance Committee**

William P. Bahnfleth, Chm/CO  
Constantinos A. Balaras  
Hugh F. Crowther\*  
Richard D. Hermans  
David E. Knebel  
Wayne R. Reedy\*  
M. Ginger Scoggins  
Timothy G. Wentz\*

#### **Planning Committee**

Stephen D. Kennedy, Chm  
Jason Z. Alphonso  
Sheila J. Hayter\*  
Richard D. Hermans  
Ross D. Montgomery  
Bjarne W. Olesen  
Guy Perreault\* (reported at June 29 BOD meeting)  
Harvey M. Sachs  
Samir R. Traboulsi  
Ross D. Montgomery, CO  
Jeff H. Littleton, NVM/EVP  
W. Stephen Comstock, NVM/Staff Director\*

## Committees Reporting to Members Council

### Chapter Technology Transfer Committee

Elbert G. Phillips, Chm  
Farooq Mehboob, VChm  
Wei Sun, VChm  
Steven L. Rosen (I)  
Jean-Gabriel Joannette (II)  
Mark A. Tome (III)  
Harris M. Sheinman (IV)\*  
Robert J. Laneve (V)  
Corey B. Metzger (VI)  
Chad E. Moore (VII)\*  
Keith H. Reihl (VIII)\*  
Thomas G. Lewis (IX)  
Scott E. Wayland (X)  
N. Eileen Jensen (XI)  
John P. Pennington (XII)\*  
Yong Kong Ng (XIII)  
Ashish Rakheja, (RAL)\*  
Richard D. DesLauriers, Mbr/Chap.Prog.Coord.  
Andrew L. Cochrane, Mbr/Comm. Coord.  
Thomas E. Werkema Jr., Cons/Govt Activities  
Donald A. Siller, Cons/Refrigeration  
R. Christopher Mathis, Cons/Energy\*  
~~Shanti D. Pless~~, Cons/Technology  
Thomas E. Werkema, BOD ExO\*  
Thomas E. Watson, CO.\*

### Conferences & Expositions Committee

Dennis J. Wessel, Chm  
Ben A. Leppard, Jr., VChm  
Pamela L. Androff  
Walid Chakroun\*  
Wade H. Conlan  
Kelley P. Cramm  
K. William Dean  
Charles E. Henck  
Mohammad H. Hosni  
Yunho Hwang\*  
Julia A. Keen  
Dunstan L. Macauley III  
Sarah E. Maston  
Michael J. McDermott  
Robert B. Risley  
Monte G. Troutman  
Charles C. Wilkin\*  
~~\_\_\_\_\_~~ ~~(pending)~~ [Robert G. Baker](#)\*  
~~\_\_\_\_\_~~ ~~(pending)~~ [John J. Cohen](#)\*  
~~\_\_\_\_\_~~ ~~(pending)~~ [\\*Keith C. Newcomer](#)  
A. Damon Gowan, Mbr/Joint Expo  
Stephen D. Kennedy, BOD ExO\*  
Thomas E. Watson, CO\*

### Honors and Awards Committee

C. Brian Wandling, Chm  
Raymond E. Patenaude, VChm  
William J. Coad\*  
Julian R. de Bullet  
Victor W. Goldschmidt\*  
Essam E. Khalil  
Wilfred Laman\*  
J. Thomas Sobieski\*  
Marija S. Todorovic  
Vincent K. C. Tse  
Ronald P. Vallort  
Samir R. Traboulsi, BOD ExO\*  
Thomas E. Watson, CO\*

### Membership Promotion Committee

Russell J. Lavitt, Chm  
Roger K. Jones, VChm  
Richard E. Vehlow (I)  
Catherine E. Godin (II)  
Gary C. Debes (III)\*  
Bryan M. Holcomb (IV)  
Douglas D. Fick (V)  
Mark F. Miller (VI)  
Frank H. Schambach(VII)  
Randy C. Schrecengost (VIII)  
Gaylen V. Atkinson (IX)  
Marites Dagulo Calad (X)  
Murdoch D. MacPherson (XI)  
Jason Z. Alphonso (XII)\*  
Eric M. Panzo (XIII)  
Dimitrios A. Charalambopoulos, (RAL)\*  
James R. Fields, Consultant\*  
Samir R. Traboulsi, BOD ExO\*  
Thomas E. Watson, CO\*

## Research Promotion Committee

M. Dennis Knight, Chm  
Walter W. Law, Jr., VChm  
Jeff Clarke, VChm  
John A. Rieke, VChm  
Darcy A. Carbone (I)  
Daryl E. Somers (II)\*  
James M. Grant (III)  
Will Thomason (IV)  
Dominic Cacolici (V)  
Craig R. Johnson (VI)  
Edward A. Dusch (VII)\*  
Rhamy L. Morrison (VIII)  
Gary L. Cooper (IX)  
Tiffany Bates (X)  
Ray P. Sieber (XI)  
~~\_\_\_\_\_~~ (pending) [Richard J. Ellison](#) (XII)\*  
Edward Ka Cheung Tsui (XIII)  
M. Bassel Anbari, (RAL)  
Jeff Clarke, ASHRAE Res. Canada Rep.  
Daniel R. Rogers, Consultant\*  
Thomas E. Werkema, Jr., BOD ExO\*  
Thomas E. Watson, CO\*

## Student Activities Committee

Joel C. Primeau, Chm  
John T. Moore, VChm  
Om Taneja (I)  
Francis Lacharite (II)  
Jennifer E. Leach (III)\*  
Peggy J. Fritz (IV)  
Douglas F. Zentz (V)  
Buss Andrew Price (VI)  
Benjamin T. Womble (VII)  
Aruna D. Abhayagoonawardhana (VIII)  
Kevin L. Ainsworth (IX)\*  
Joseph A. Chin (X)\*  
Stefan Lidington (XI)\*  
Florentino Roson Rodriguez, Sr. (XII)\*  
Sam C.M. Hui (XIII)\*  
Nohad I. Boudani, (RAL)  
David B. Meredith, Accred. Rep/ABET BOD  
Amir Karimi, Accred. Rep/ABET EAC  
Lorraine A. Kapka, Accred. Rep/ABET TAC  
Stephen D. Kennedy, BOD ExO\*  
Thomas E. Watson, CO\*

## Young Engineers in ASHRAE Committee

Matt C. Rowe, Chm  
Carrie R. Kely, VChm  
Cara S. Martin, Region I Coordinator  
Aaron R. Smith, Region II Coord.\*  
Christopher G. Albright, Region III Coord.\*  
Michael M. Collarin, Region IV Coord.\*  
~~\_\_\_\_\_~~ (pending) [Osi Okonkwo](#), Region V Coord.\*  
Steve N. Spentzas, Region VI Coord.  
Chris M. Gray, Region VII Coord.\*  
Bo A. Twumasi, Region VIII Coord.  
Tim J. Hughes, Region IX Coord.\*  
Cynthia L. Hyatt, Region X Coord.\*  
Tariq A. Amlani, Region XI Coord.  
Megan Tosh, Region XII Coord.  
Dennis L. Alejandro, Region XIII Coord.\*  
Paraskevi Koutsogianni, RAL Coord.  
Roger K. Jones, Liaison/MP\*  
Francis Lacharite, Liaison/SA\*  
Nicolas Lemire, Consultant  
Samir R. Traboulsi, BOD ExO\*  
Thomas E. Watson, CO\*

## Committees Reporting to Publishing and Education Council

### Certification Committee

Amy B. Musser, Chm  
David B. Meredith, VChm  
William K. Klock\*  
Brian M. Lynch  
Matt Nelson  
Chee S. Ow\*  
Shanta L. Tucker  
James W. Bochat, Consultant\*  
Hugh F. Crowther BOD ExO\*  
T. David Underwood, CO\*

### Electronic Communications Committee

~~Coy J. Brandenburg~~ [Heather L. Nowakowski](#), Chm  
Gildardo Yanez, VChm  
Robert Coleman\*  
Mark M. Hydeman  
Lawrence C. Markel  
~~Heather L. Nowakowski~~ [Angela M. Lewis](#)\*  
Benjamin A. Skelton  
Adrienne G. Thomle\*  
Hugh F. Crowther, BOD ExO\*  
T. David Underwood, CO\*

### Historical Committee

George E. Menzies, Chm  
Irene Reichert, VChm  
David Arnold\*  
Gary E. Grange  
Gerald C. Groff  
Alexander Weiss  
J. Richard Wright  
Bernard A. Nagengast, Consultant  
Michael J. Brandemuehl, BOD ExO\*  
T. David Underwood, CO\*

#### Regional Historians

Alexander Weiss (I)  
George E. Menzies (II)  
Rennison W. Tisdale, Jr. (III)  
Paul K. Tuggle (IV)\*  
Thomas J. Ferdelman (V)  
Paul K. Melton (VI)  
Thomas E. Hodge (VII)  
~~\_\_\_\_\_~~ ~~(pending)~~ [Randy C. Schrecengost](#) (VIII)  
Gary E. Grange (IX)  
Clayton A. Lampman (X)  
K. William Dean (XI)  
Oswaldo D. S. Bueno (XII)  
~~\_\_\_\_\_~~ ~~(pending)~~ [Low Han Guan Den](#) (XIII)  
Paraskevi Koutsogianni (RAL)

## Professional Development Committee

John H. Nix, II, Chm  
Thomas H. Phoenix, VChm\*  
Cynthia A. Cogil, VChm  
Donald L. Brandt  
Jorge E. Donoso\*  
~~Emil E. Friberg~~ (reported at June 29 BOD meeting)  
Nathan P. Hart\*  
Cameron R. Labunski  
Kirk T. Mescher  
Darin W. Nutter  
Saunders C. Smith  
Lawrence B. Stoff  
Michael J. Brandemuehl, BOD ExO\*  
T. David Underwood, CO\*

### Publications Committee

William S. Fleming, Chm  
Francis A. Mills, VChm  
George W. Austin\*  
Michael R. Brambley  
Timothy C. Dwyer\*  
Vinod P. Gupta  
Pamela M. Immekus\*  
Ashish Rakheja  
Richard H. Rooley\*  
Branislav B. Todorovic  
Roberto R. Aguilo, BOD ExO\*  
T. David Underwood, CO\*

## Committees Reporting to Technology Council

### Environmental Health Committee

Jianshun S. Zhang, Chm/Past RAC  
Chandra Sekhar, VChm/Outside NA  
Leon E. Alevantis  
William J. Fisk\*  
Roger L. Hedrick\*  
Mark C. Jackson  
Yuguo Li  
Zuraimi M. Sultan  
Pawel Wargocki  
~~Eric D. Werling~~ Wane A. Baker\*  
David T. Grimsrud, Mbr/Past Stds\*  
Jan Sundell, Mbr/Physician  
Paul Francisco, Mbr/Past TC Chair  
Lewis Radonovich, Jr., Mbr/Health Prof.  
Andrew K. Persily, Mbr/Past Society Officer  
Hal Levin, Consultant  
Patricia T. Graef, BOD ExO\*  
Ross D. Montgomery, CO\*

### Refrigeration Committee

Douglas C. Scott, Chm  
Cesar Luis Lim, VChm  
Pradeep K. Bansal  
Jeffrey B. Berge\*  
Marc Chasserot  
Teddy S. Hansen  
David K. Hinde\*  
Todd B. Jekel  
Dan M. Manole  
Andrew B. Pearson  
Richard R. Royal\*  
Christopher J. Seeton\*  
Donald A. Siller, Cons/CTTC Liaison  
Charles E. Gullledge III, BOD ExO\*  
Ross D. Montgomery, CO\*

# For Information Only

2011-2012

## Members Elected / Appointed to Councils

### Members Council

Thomas E. Watson, Chm/President-Elect  
William P. Bahnfleth, VC/Treasurer\*  
Stephen D. Kennedy, Mbr/DAL\*  
Samir R. Traboulsi, Mbr/DAL\*  
Thomas E. Werkema, Jr., Mbr/DAL\*  
Spencer Morasch (I) (12)  
Guy Perreault (II) (12)  
Kevin W. Fallin (III) (12)  
T. Randall Jones (IV) (13)  
R. Lee Millies (V) (13)  
Tina M. Brueckner (VI) (13)  
Jeffrey W. Gatlin (VII) (14)\*  
John L. Harrod (VIII) (14)\*  
Richard J. Bowman (IX) (14)\*  
Michael T. Burgess (X) (14)\*  
Erich Binder (XI) (12)  
William W. Malphus (XII) (13)  
Wichai Laksanakorn (XIII) (13)  
Ashok K. Virmani (RAL) (14)\*

*(In addition to the above voting members, this council includes chairs of committees reporting to the council as non-voting members.)*

### Publishing and Education Council

T. David Underwood, Chm/VP  
Timothy G. Wentz, VC/VP\*  
Roberto R. Aguilo, Mbr/DAL\*  
Michael J. Brandemuehl, Mbr/DAL\*  
Hugh F. Crowther, Mbr/DAL\*  
Larry J. Fisher, Mbr/Past Certification (12)  
Bruce Billedeaux, Mbr/Past Electronic Comm. (13)  
Kenneth M. Fulk, Mbr/Past Handbook (14)\*  
Timothy J. McGinn, Mbr/Past Professional Dev.(12)  
Kimball E. Ferguson, Mbr/Past Publications (14)\*  
Richard M. Rose, Mbr/At-Large (13)\*  
Walid Chakroun, Mbr/At-Large(14)\*

*(In addition to the above voting members, this council includes chairs of committees reporting to the council as non-voting members.)*

### Technology Council

Ross D. Montgomery, Chm/VP  
Constantinos A. Balaras, VC/VP\*  
Patricia T. Graef, Mbr/DAL\*  
Eckhard A. Groll, Mbr/DAL\*  
Charles E. Gullede III, Mbr/DAL\*  
Lawrence C. Markel, Mbr/Past RAC(14)\*  
Bodr R. Subherwal, Mbr/Past Standards (12)  
Donald M. Brundage, Mbr/Past TAC (13)  
Daniel C. Pettway, Mbr/Past DRC (13)  
Michael F. Beda, Mbr/At-Large (13)  
Karen C. Thrasher, Mbr/At-Large (14)\*  
Arthur D. Hallstrom, Mbr/At-Large (12)

*(In addition to the above voting members, this council includes chairs and vice chairs of committees reporting to the council as non-voting members.)*

# For Information Only

2011-2012

## Members Elected to Committees

### Standards Committee

Carol E. Marriott, Chm (12)  
Kenneth W. Cooper, VChm (12)  
Douglass S. Abramson (13)  
Karim Amrane (14)  
Charles S. Barnaby (15)\*  
Hoy R. Bohanon, Jr. (13)  
Steven F. Bruning (14)  
David R. Conover (15)\*  
Steven J. Emmerich (15)\*  
Allan B. Fraser (12)  
Krishnan Gowri (14)  
Maureen Grasso (14)  
Cecily M. Grzywacz (14)  
Richard L. Hall (14)  
Rita M. Harrold (15)\*  
Adam W. Hinge (15)\*  
Debra H. Kenroy (15)\*  
Jay A. Kohler (13)  
Janice C. Peterson (14)  
Douglas T. Reindl (12)  
Boggarm S. Setty (12)  
James R. Tauby (13)  
James K. Vallort (13)  
William F. Walter (12)  
Michael W. Woodford (12)  
Craig P. Wray (13)  
Eckhard Groll, BOD ExO\*  
Ross D. Montgomery, CO\*

### Research Administration Committee

Hugh I. Henderson, Jr., Chm (12)  
Jaap J. Hogeling, VChm (12)  
Pradeep K. Bansal (15)\*  
Donald B. Bivens (15)\*  
Piotr A. Domanski (14)  
Srinivas Garimella (15)\*  
Arthur L. Giesler (13)\*  
Stephen S. Hancock (12)\*  
John M. House (13)

Carl F. Huber (15)  
George A. Jackins (12)  
William F. McCoy (13)\*  
T. Agami Reddy (12)  
David A. Yashar (15)\*  
Xudong Wang, Cons/AHRI  
Hywel Davies, Cons/CIBSE  
Chris Scruton, Cons/CEC-PIER  
Chris Pyke, Cons/USBGC  
Richard S. Sweetser, Cons/GPIC\*  
Patricia T. Graef, BOD ExO\*  
Ross D. Montgomery, CO\*

### Technical Activities Committee

Charles H. Culp, Chm (12)  
William F. McQuade, VChm (~~12~~13)  
Eric W. Adams (14)  
Michael R. Bilderbeck (15)\*  
Drury B. Crawley (12)  
Stephen W. Duda (15)\*  
John F. Dunlap (13)  
Mark W. Fly (15)\*  
Brian A. Fricke (13)  
Walter T. Grondzik (14)  
Thomas M. Lawrence (14)  
Guistino N. Mastro (13)  
William E. Murphy (14)  
Victor L. Penar (13)  
J. Thomas Sobieski (15)\*  
Brian M. Silvetti (12)  
Charles E. Gulledge III, BOD ExO\*  
Ross D. Montgomery, CO\*

# For Information Only

2011-2012

## Members Elected to Committees (Continued)

### Handbook Committee

Rex E. Noble, Chm  
Cynthia A. Callaway, VChm  
Roberto R. Aguilo, BOD ExO\*  
T. David Underwood, CO\*

### Subcommittee for 2012 Systems and Equipment Handbook

Cynthia A. Callaway, Sub/Chm  
David A. John  
Thomas M. Lawrence  
Russell E. Lindemann  
Harris M. Sheinman  
Forrest S. Yount

### Subcommittee for 2013 Fundamentals Handbook

Hassan M. Bagheri, Sub/Chm  
James D. Aswegan  
Jill A. Connell  
Peter Simmonds  
Jeff J. Traylor  
David P. Yuill

### Subcommittee for 2014 Refrigeration Handbook Volume

Daniel J. Dettmers, Sub/Chm  
Donald L. Fenton  
Teddy S. Hansen  
Frederick A. Lorch  
Ramon Pons  
Phillip M. Trafton

### Subcommittee for 2015 Applications Volume

Christopher J. Ahne, Sub/Chm\*  
Paula A. Hernandez\*  
Sheldon M. Jeter\*  
Francis A. Mills\*  
George J. Sestak\*  
Gerald G. Williams\*

# For Information Only

## 2011-2012 Nominating Committee

Chairman: Gordon V. R. Holness  
Vice Chairman: Lynn G. Bellenger

### Selected by Regions

#### Region Members

I Emery [M.](#) Otruba  
II Douglas C. Cochrane  
III Charles E. Henck  
IV Caroline C. Calloway  
V Frederick W. Betz  
VI Charles E. Dale-Derks  
VII John O. Richardson, Jr.  
VIII Florentino J. Mendez  
IX [D.](#) Larry Simmon  
X Saul V. Villanueva  
XI ~~Kevin L. Marple~~ [Norman Grusnick](#)  
XII Wade H. Conlan  
XIII Wei-Dong Wang  
RAL Pankaj Dharkar

#### Region Alternates

I Russell J. Stuber  
II Jeff Clarke  
III Julian R. de Bullet  
IV Bryan T. Lampley  
V Monte G. Troutman  
VI Mark C. Hegberg  
VII Michael R. Bilderbeck  
VIII Kenneth M. Fulk  
IX James L. Matthews  
X Donald L. Brandt  
XI ~~Norman Grusnick~~ [N. Eileen Jensen](#)  
XII Robert B. Risley  
XIII Sunny Tan  
RAL Essam E. Khalil

### Elected by BOD

#### Members

Darryl K. Boyce (II)  
Traci A. Hanegan (XI)  
Richard D. Hermans (VI)  
David E. Knebel (VIII)  
William E. Murphy (VII)  
Garry N. Myers (I)  
Kent W. Peterson (X)  
Edward K. C. Tsui (XIII)

#### Alternates

Arthur L. Giesler (VIII)  
Wilfred Laman (II)  
Tim J. McGinn (XI)  
Chee S. Ow (XIII)  
M. Ginger Scoggins (IV)  
~~Terry E. Townsend (VII)~~ [Lee W. Burgett \(VI\)](#)  
Martha G. VanGeem (VI)  
Dennis J. Wessel (V)

**REPORT TO BOARD OF DIRECTORS  
From Executive Committee  
Meeting of Wednesday, June 29, 2011**

**Recommendations for Board approval:**

1. On recommendation of the Scholarship Trustees, ExCom recommends that the Scholarship Program Guidelines be amended as follows:

General Guidelines:

- 2.8 No preference shall be given by the Scholarship Trustees to any candidate ~~who is or has been, or whose relative is, or has been, a member of ASHRAE, the Board of Directors and/or the Scholarship Trustees. No candidate shall be allowed to indicate any relative's activities in ASHRAE on the scholarship application form. At the discretion of the Scholarship Trustees, any such indication may result in the disqualification of the candidate's scholarship application form from further consideration.~~

Background: The change brings focus to the wording, “No preference shall be given...” and “disqualification” by removing the penalty for deliberate or accidental mentioning of a relative’s prominence in ASHRAE in the application materials. (ExCom vote: Unanimous voice, chair not voting)

**Information Items:**

1. The ASHRAE Foundation reported an increase in charitable giving this fiscal year over last of \$132,000 and 105 additional gifts.
2. The Scholarship Trustees selected the following students to receive High School Senior Scholarships for the 2011-2012 academic year:  

Boyd King, Arkansas Tech. University, Engineering  
Justin Altemus, University of Delaware, Engineering
3. The Scholarship Trustees selected the following students to receive Engineering Technology Scholarships:

Addie Farr, Dunwoody College of Technology, Air-Conditioning Systems Design  
Anthony Stamm, John A Logan College, HVAC&R & Green Technology  
Rhone Jadis, DeVry University, Electronics Engineering Technology



\_\_\_\_\_  
June 29, 2011  
Date

\_\_\_\_\_  
Lynn G. Bellenger, President

**REPORT TO BOARD OF DIRECTORS**  
**From Members Council**  
**Meeting of June 27-28, 2011**

**Recommendations for Board approval:**

1. Members Council recommends to the Board of Directors that the structure of Members Council be revised to remove DRCs from this Council and to replace them with qualified appointed representatives from each region.

Background:

1. The DRC's involvement in Members Council activities, which include at least ½ day of subcommittee meetings and two ½ days of full Council meetings at each Society Meeting, additional ad-hoc or sub-committee assignments, fall meetings, related conference calls and other related time, takes valuable time away from each DRC which also hinders the effectiveness of the DRC as an overall BOD member. Being a member of this Council also limits the DRC's ability to effectively serve on BOD subcommittees or other BOD assigned ad-hoc committees.
2. Members Council and the BOD have both expended a great deal of time debating this and other similar issues for at least three (3) or more years and many options have been examined. This option is intended to address this issue by fully removing DRCs from this Council.
3. This proposal includes having replacements from each region to fill these positions. One representative, nominated from each region, similar to how Assistant Regional Chairs (ARCs) are currently nominated, would fill these positions.
4. Nominees would be required to fulfill specific qualifications such as having been a former RVC, ARC, DRC or filled another regional level position for at least three (3) years. These are essentially the same qualifications that are generally considered for DRC candidates. This new position for each region also allows for the training of future DRCs. It is likely that the persons serving on this Council will become a future DRC (not required). It is not intended to make it mandatory to serve on Members Council to become a DRC although it would be desirable.
5. ARCs would continue to be selected as they currently are. The person serving on Members Council may also be the ARC but it is not being suggested here to be mandatory.
6. It is the intent of this motion to retain the DRC as being fully responsible for all regional operations, as they are now, but to allow each DRC and region as much flexibility as possible in how they assign and fill each of these three (3) positions within ASHRAE guidelines (DRC, ARC and now a Members Council representative).
7. It is envisioned that this change would occur effective beginning in the 2013-2014 Society year to allow for a change to the Bylaws and pertinent ROBs, MC Manual of Procedures (MOP) and Manual for Chapter Operations (MCO) changes to be made. At the beginning of the 2013-2014 society year the regions with new DRCs would not serve on MC and would also have new non-DRC MC members, separate from the DRC. The remaining 2/3s of the Council would still be DRCs. The next year the same process would be followed with another 1/3 of the membership on MC to change and then in the 3rd year the entire regional representation on MC would not

- be DRCs. This is a three (3) year implementation process.
8. It is intended, under this motion, that the MC representative would work closely with their DRC and other regional officers/chairs to insure that regional matters are considered in all deliberations.
  9. The only Bylaw change that would be required under this motion is that from Article VI, Councils, Section 6.5: Recommend revising "Regional Chairs" to "Regionally appointed representatives."
  10. It is anticipated that this motion would result in the least amount of changes to the current ROB, MOP and MCO although changes would be required to each.
  11. The intent of this motion is to make the required changes and resulting transition as simple and as easy as possible.
  12. This motion also allows for the most flexibility of how regions are operated.
  13. It is intended that all new DRCs would be able to serve on BOD appointed committees in their 1st year of serving on the BOD with the possibility that they might serve as ExO on standing committees similar to DALs, in the future, although that is not a part of this motion.

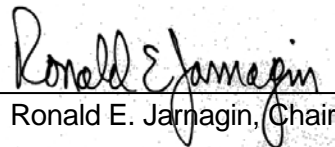
Fiscal Impact: The total estimated transportation expenses for Members Council Representatives = Minimum \$19,200 to Maximum \$41,200.

- Transportation reimbursement for three Members Council meetings annually = \$28,000 (If the Fall MC meeting is held via conference call then the transportation reimbursement for two Members Council meetings annually = \$19,200.)
- Members Council Representatives transportation reimbursement to the annual CRC = \$6,200.
- Members Council Representatives transportation reimbursement to the annual Regional Planning Meeting = \$6,200.

Vote: 11-4-2, CNV

June 28, 2011

Date

  
Ronald E. Jarnagin, Chair

**REPORT TO BOARD OF DIRECTORS**  
**From Publishing and Education Council**  
**Meeting of June 28, 2011**

**Recommendations for Board approval:**

**1. PEC recommends the BOD reaffirm the ASHRAE Units Policy (ROB 1.201.002)**

Background: The ASHRAE Units Policy is required by the PEC ROB to be reviewed and reconfirmed at the annually. (*PEC Approved 9-0-0 CNV*)

Fiscal Impact: None.

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- |                               |             |   |
|-------------------------------|-------------|---|
| <b>1.201.002 Units Policy</b> | 100-113-001 | 82-07-01-30/84-06-21-39/85-06-27-41/87-01-19-28/<br>88-05-21-37/90-02-14-10/90-06-14-31/91-01-24-51B/<br>92-07-02-39/93-07-01-54/94-01-26-57/94-06-30-32B/<br>95-02-02-38/95-06-29-29/01-06-28-38C/04-06-30-13<br>07-06-27-22/08-06-25-14/09-06-24-14 |
|-------------------------------|-------------|---|
- 
- |             |   |
|-------------|---|
| 1.201.002.1 | The units use or application policy shall include, as a minimum, time-dated directions on the use of SI and I-P in all ASHRAE publications.   |
| 1.201.002.2 | TC 1.6 shall serve as the authority on SI and I-P usage and application.  |
| 1.201.002.3 | Research projects; codes, standards, guidelines and addenda thereto; special publications; Insights articles; Journal articles; and Handbooks shall be prepared using the International System of Units (SI) and/or inch-pound units (I-P) in formats approved by the Publishing and Education Council.   |
| 1.201.002.4 | The Publishing and Education Council shall review annually the approved formats to be used in ASHRAE publications, considering suggestions from members and committees, and shall establish any changes in the approved formats.  |
| 1.201.002.5 | The Publishing and Education Council shall consider this Units Policy annually and shall recommend to the Board of Directors the formats to be used in ASHRAE publications.<br>A. The format for ASHRAE publications shall be dual units, except in cases determined by the Publishing and Education Council, where two separate versions are to be published, where one is rational SI and the other is rational I-P. For selected ASHRAE standards and guidelines, the Standards Committee may approve use of SI units only.<br>B. In dual unit publications, the units used in calculating the work being reported shall be listed first. The alternate system of units should follow in parentheses. Authors shall round off equivalents in the alternate system of units so that they imply the same accuracy as is implied with primary units.<br>C. Exceptions require the approval of the Director of Publishing and Education. |
| 1.201.002.6 | Handbook volumes shall be published in separate SI and I-P editions.  |

June 28, 2011  
Date

Sheila J. Hayter  
Sheila J. Hayter, Chair

**REPORT TO BOARD OF DIRECTORS**  
**From Technology Council**  
**Meetings of June 28-29, 2011**

**Motions Requiring Board Vote:**

[**NOTE:** A summary of any unresolved commenters and negative project committee voters on the following publication drafts is included in the background to each motion. More information is available on the analysis sheets that were distributed prior to the meeting.]

By default, all publication drafts will be processed by our ANSI Audited Designator procedures unless otherwise indicated by the Board. The procedures no longer require Technology Council approval for publication votes, so the vote shown with the motion is the Standards Committee vote. In all cases, the fiscal impact for publication drafts is within existing budgets.]

**Consent motions 1 – 29 have no unresolved commenters and no negative votes on the project committee for publication approval.**

1. It is recommended that BSR<sup>1</sup>/ASHRAE Standard 32.2-2003 (RA 2011), *Methods of Testing for Rating Pre-Mix and Post-Mix Beverage Dispensing Equipment*, be approved for publication.

**StdC VOTE:** 21-0-2<sup>2</sup>, CNV

2. It is recommended that BSR/ASHRAE Addendum *i* (adds new refrigerant 1234ze (E) to Tables 1, *Refrigerant Data and Safety Classifications* and D1, *Refrigerant Data*) to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, be approved for immediate publication.

**BACKGROUND:** Updates to code-intended standards are normally published at 18-month intervals. However, some situations warrant a different publication schedule. Recognizing this, Standards Committee passed a motion that would allow SSPC 34 to request immediate publication regarding the addition of new refrigerants to reach the market sooner.

**StdC VOTE:** 21-0-2<sup>3</sup>, CNV

3. It is recommended that BSR/ASHRAE Addendum *j* (adds new azeotropic refrigerant 511A to Table 2, *Data and Safety Classifications for Refrigerant Blends* and Table D2, *Data for Refrigerant Blends*) to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, be approved for immediate publication.

**BACKGROUND:** Updates to code-intended standards are normally published at 18-month intervals. However, some situations warrant a different publication schedule. Recognizing this, Standards Committee passed a motion that would allow SSPC 34 to request immediate publication regarding the addition of new refrigerants to reach the market sooner.

**StdC VOTE:** 21-0-2<sup>4</sup>, CNV

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<sup>1</sup> BSR is the ANSI Board of Standards Review.

<sup>2</sup> Jay Kohler and Bill Walter abstained because they are members of SSPC 34.

<sup>3</sup> Jay Kohler and Bill Walter abstained because they are members of SSPC 34.

4. It is recommended that BSR/ASHRAE Addendum *k* (deletes the provisional status of refrigerant concentration limit (RCL) values for refrigerants 14, 115, 170, C318, 1270, 405A, 416A, 417A, 424A, 426A, and 504) to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, be approved for immediate publication.

**BACKGROUND:** Updates to code-intended standards are normally published at 18-month intervals. However, some situations warrant a different publication schedule. Recognizing this, Standards Committee passed a motion that would allow SSPC 34 to request immediate publication regarding the addition of new refrigerants to reach the market sooner.

**StdC VOTE:** 21-0-2<sup>5</sup>, CNV

5. It is recommended that BSR/ASHRAE Addendum *l* (changes the cardiac sensitization no observed effect level (NOEL) values and deletes the lowest observed effect level (LOEL) value for R-32) to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, be approved for immediate publication.

**BACKGROUND:** Updates to code-intended standards are normally published at 18-month intervals. However, some situations warrant a different publication schedule. Recognizing this, Standards Committee passed a motion that would allow SSPC 34 to request immediate publication regarding the addition of new refrigerants to reach the market sooner.

**StdC VOTE:** 21-0-2<sup>6</sup>, CNV

6. It is recommended that BSR/ASHRAE Addendum *n* (requires refrigerant applicants to provide 'pressure at the critical point' data) to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, be approved for immediate publication.

**BACKGROUND:** Updates to code-intended standards are normally published at 18-month intervals. However, some situations warrant a different publication schedule. Recognizing this, Standards Committee passed a motion that would allow SSPC 34 to request immediate publication regarding the addition of new refrigerants to reach the market sooner.

**StdC VOTE:** 21-0-2<sup>7</sup>, CNV

7. It is recommended that BSR/ASHRAE Addendum *o* (clarifies the requirements of clause B1, *Flammability Testing*) to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, be approved for immediate publication.

**BACKGROUND:** Updates to code-intended standards are normally published at 18-month intervals. However, some situations warrant a different publication schedule. Recognizing this, Standards Committee passed a motion that would allow SSPC 34 to request immediate publication regarding the addition of new refrigerants to reach the market sooner.

**StdC VOTE:** 21-0-2<sup>8</sup>, CNV

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<sup>4</sup> Jay Kohler and Bill Walter abstained because they are members of SSPC 34.

<sup>5</sup> Jay Kohler and Bill Walter abstained because they are members of SSPC 34.

<sup>6</sup> Jay Kohler and Bill Walter abstained because they are members of SSPC 34.

<sup>7</sup> Jay Kohler and Bill Walter abstained because they are members of SSPC 34.

<sup>8</sup> Jay Kohler and Bill Walter abstained because they are members of SSPC 34.

8. It is recommended that BSR/ASHRAE Addendum *a* (clarifies Figures 5.2.3.2 and 5.3 by providing numerical adjustment factors and equations) to ANSI/ASHRAE Standard 55-2010, *Thermal Environmental Conditions for Human Occupancy*, be approved for publication.

**StdC VOTE:** 23-0-0, CNV

9. It is recommended that BSR/ASHRAE Addendum *d* (adds an alternative exhaust rate design procedure that provides the designer with a performance path) to ANSI/ASHRAE Standard 62.1-2010, *Ventilation for Acceptable Indoor Air Quality*, be approved for publication.

**StdC VOTE:** 21-0-2<sup>9</sup>, CNV

10. It is recommended that BSR/ASHRAE Addendum *e* (clarifies requirements for system control needed to assure proper ventilation rates) to ANSI/ASHRAE Standard 62.1-2010, *Ventilation for Acceptable Indoor Air Quality*, be approved for publication.

**StdC VOTE:** 21-0-2<sup>10</sup>, CNV

11. It is recommended that BSR/ASHRAE/IES Addendum *b* (permits automatic stopping and starting of escalators or moving walks) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.

**StdC VOTE:** 20-0-3<sup>11</sup>, CNV

12. It is recommended that BSR/ASHRAE/IES Addendum *c* (clarifies use of an outdoor air bypass damper that ensures a constant volume stack discharge as the baseline approach) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.

**StdC VOTE:** 20-0-3<sup>12</sup>, CNV

13. It is recommended that BSR/ASHRAE/IES Addendum *g* (adds Table 6.8.1L defining minimum efficiency requirements for commercial refrigerators and freezers) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.

**StdC VOTE:** 20-0-3<sup>13</sup>, CNV

14. It is recommended that BSR/ASHRAE/IES Addendum *h* (amends the minimum energy efficiency standards for water-to-air heat pumps listed in Table 6.8.1B, *Electrically Operated Unitary and Applied Heat Pumps – Minimum Efficiency Requirements*) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.

**StdC VOTE:** 20-0-3<sup>14</sup>, CNV

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<sup>9</sup> Hoy Bohanon abstained because he is a member of SSPC 62.1. Craig Wray abstained because he works with a member of SSPC 62.1.

<sup>10</sup> Hoy Bohanon abstained because he is a member of SSPC 62.1. Craig Wray abstained because he works with a member of SSPC 62.1.

<sup>11</sup> Allan Fraser, Karim Amrane and Frank Meyers abstained because they are current or past members of SSPC 90.1.

<sup>12</sup> Allan Fraser, Karim Amrane and Frank Meyers abstained because they are current or past members of SSPC 90.1.

<sup>13</sup> Allan Fraser, Karim Amrane and Frank Meyers abstained because they are current or past members of SSPC 90.1.

<sup>14</sup> Allan Fraser, Karim Amrane and Frank Meyers abstained because they are current or past members of SSPC 90.1.

15. It is recommended that BSR/ASHRAE/IES Addendum *j* (corrects EER values in table 6.8.1A, *Electrically Operated Unitary Air Conditioners and Condensing Units- Minimum Efficiency Requirements*) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.

**StdC VOTE:** 20-0-3<sup>15</sup>, CNV

16. It is recommended that BSR/ASHRAE/IES Addendum *k* (makes transformer test procedures references consistent with references in Chapter 6) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.

**StdC VOTE:** 20-0-3<sup>16</sup>, CNV

17. It is recommended that BSR/ASHRAE/IES Addendum *ci* (cooling tower fans) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.

**StdC VOTE:** 20-0-3<sup>17</sup>, CNV

18. It is recommended that BSR/ASHRAE/IES Addendum *ds* (*corrects daylighting definitions*) to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.

**StdC VOTE:** 20-0-3<sup>18</sup>, CNV

19. It is recommended that BSR/ASHRAE Addendum *ad* (fixes miscellaneous problems in the standard such as allowing `Feedback_Value` to be used to calculate `Elapsed_Active_Time`, adds conditions to `Read-Property` and increases the segmentation window size for MS/TO) to ANSI/ASHRAE Standard 135-2010, *BACnet®—A Data Communication Protocol for Building Automation and Control Networks*, be approved for publication.

**StdC VOTE:** 23-0-0, CNV

20. It is recommended that BSR/ASHRAE Addendum *ae* (adds and clarifies authentication coding and access properties) to ANSI/ASHRAE Standard 135-2010, *BACnet®—A Data Communication Protocol for Building Automation and Control Networks*, be approved for publication.

**StdC VOTE:** 23-0-0, CNV

21. It is recommended that BSR/ASHRAE Addendum *af* (modifies events and alarms) to ANSI/ASHRAE Standard 135-2010, *BACnet®—A Data Communication Protocol for Building Automation and Control Networks*, be approved for publication.

**StdC VOTE:** 23-0-0, CNV

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<sup>15</sup>Allan Fraser, Karim Amrane and Frank Meyers abstained because they are current or past members of SSPC 90.1.

<sup>16</sup>Allan Fraser, Karim Amrane and Frank Meyers abstained because they are current or past members of SSPC 90.1.

<sup>17</sup>Allan Fraser, Karim Amrane and Frank Meyers abstained because they are current or past members of SSPC 90.1.

<sup>18</sup>Allan Fraser, Karim Amrane and Frank Meyers abstained because they are current or past members of SSPC 90.1.

22. It is recommended that BSR/ASHRAE Standard 158.2-2006R, *Methods of Testing Capacity of Refrigerant Pressure Regulators*, be approved for publication.

**StdC VOTE:** 23-0-0, CNV

23. It is recommended that BSR/ASHRAE/USGBC/IES Addendum c (groups outdoor air definitions for easier reference) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.

**StdC VOTE:** 22-0-1<sup>19</sup>, CNV

24. It is recommended that BSR/ASHRAE/USGBC/IES Addendum d (updates the reference to CDPH<sup>20</sup>/EHLB<sup>21</sup>/Standard Method V1.1<sup>22</sup>) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.

**StdC VOTE:** 22-0-1<sup>23</sup>, CNV

25. It is recommended that BSR/ASHRAE /USGBC/IES Addendum e (clarifies the requirements of E1.1, IAQ Limit Requirements) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.

**StdC VOTE:** 22-0-1<sup>24</sup>, CNV

26. It is recommended that BSR/ASHRAE /USGBC/IES Addendum h (proposes to update Section 7.4.3, *Heating, Ventilating, and Air Conditioning*) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.

**StdC VOTE:** 22-0-1<sup>25</sup>, CNV

27. It is recommended that BSR/ASHRAE /USGBC/IES Addendum j (updates Section 7.5, *Energy Performance Path* and Appendix D, *Performance Option for Energy Efficiency*) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.

**StdC VOTE:** 22-0-1<sup>26</sup>, CNV

28. It is recommended that BSR/ASHRAE /USGBC/IES Addendum k (adds requirement related to invasive plants and tree growth) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009,

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<sup>19</sup> Bogi Setty abstained because he is a member of SSPC 189.1

<sup>20</sup> CDPH is the California Department of Public Health

<sup>21</sup> EHLP is the Environmental Health Laboratory Branch

<sup>22</sup> [Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers](#)

<sup>23</sup> Bogi Setty abstained because he is a member of SSPC 189.1

<sup>24</sup> Bogi Setty abstained because he is a member of SSPC 189.1

<sup>25</sup> Bogi Setty abstained because he is a member of SSPC 189.1

<sup>26</sup> Bogi Setty abstained because he is a member of SSPC 189.1

*Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.

**StdC VOTE:** 22-0-1<sup>27</sup>, CNV

29. It is recommended that BSR/ASHRAE/USGBC/IES Addendum o (adds requirements for pedestrian friendly walkways) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.

**StdC VOTE:** 22-0-1<sup>28</sup>, CNV

**Consent motions 30 – 36 either have unresolved comments or one or more negative project committee votes. In addition to a summary provided here, full detail on the reasons for negative votes is provided on the analysis sheets that were distributed earlier.**

30. It is recommended that BSR/ASHRAE Addendum c (changes the OEL<sup>29</sup> for R-1234yf from 400 to 500 to be consistent with the AIHA<sup>30</sup> workplace environmental exposure level (WEEL) value) to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, be approved for immediate publication.

**BACKGROUND:** There is one unresolved commenter, James Calm, and no negative project committee votes. Mr. Calm objects to the OEL change from 400 ppm to 500 ppm. 500 ppm is the current AIHA WEEL value published in the 2009 WEEL Handbook. His concern is perceived deficiencies in its basis and disclosure and procedural issues specifically because the online comment database showed the Chair Mr. David Wilson, consultant to Honeywell the company that submitted the application, as approving the response to the commenter. It was pointed out to Mr. Calm that Mr. Wilson abstained on all motions regarding the addendum and that the online comment database only allows the Chair to send the response from the system. Mr. Calm was provided an extension to submit his reply to the committee's response. SSPC 34 feels confident in publishing Addendum c relying on the AIHA assigned WEEL value, which is an accepted authoritative source recognized in Section 9.6.2, *Chronic Toxicity*, of Standard 34. The project committee voted in favor of publication 11-0-0-2-0 Chair Abstained (Yes-No-No without comment-Abstain-Ballot not returned).

Additionally, updates to code-intended standards are normally published at 18-month intervals. However, some situations warrant a different publication schedule. Recognizing this, Standards Committee passed a motion that would allow SSPC 34 to request immediate publication regarding the addition of new refrigerants to reach the market sooner.

**StdC VOTE:** 21-0-2<sup>31</sup>, CNV

31. It is recommended that BSR/ASHRAE Addendum i (provides an infiltration rate for the methodology for intermittent ventilation) to ANSI/ASHRAE Standard 62.2-2010, *Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings*, be approved for publication.

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<sup>27</sup> Bogi Setty abstained because he is a member of SSPC 189.1

<sup>28</sup> Bogi Setty abstained because he is a member of SSPC 189.1

<sup>29</sup> OEL is the Occupational Exposure Limit.

<sup>30</sup> AIHA is the American Industrial Hygiene Association.

<sup>31</sup> Jay Kohler and Bill Walter abstained because they are members of SSPC 34.

**BACKGROUND:** There are no unresolved commenters. There are two negative PC voters: Armin Rudd and Paul Francisco. Mr. Rudd had concerns that the range of analysis and the assumptions on the analysis for changing the intermittent ventilation section were not presented to the committee. Further, Mr. Rudd indicated that the assumption about the assumed constant average infiltration is not well understood. Finally, the analysis given is based only on annual average exposure to a selected contaminant(s) with mostly unknown health effect at concentrations typically found in dwellings. Mr. Rudd believes the entire part of “acceptable indoor air quality” that relates to odor control is ignored. The Chair indicated that the committee proposal to revise section 4.5 (which became addendum i) was sent in advance of the Las Vegas meeting with a 13 page paper which included the relevant equations, definitions and assumptions. This paper included a figure showing the impact of various levels of infiltration and fractional on-times on ventilation effectiveness which was used to develop the revised Table 4.2 (the substantive change in addendum i). The paper included 3 case study examples to demonstrate the impact of the change relative to the current Table 4.2.

Mr. Francisco was concerned that the background for the proposal indicated that the reason for the proposal was because infiltration has a major impact on the intermittent rate required, but then uses a different default infiltration rate (with the current table assuming no infiltration). The new default is said to be internally consistent with the standard at 0.02 cfm/sf, assuming 400 sf/person in the house. The project committee voted in favor of publication 13-2-0-2-3 Chair Abstained (Yes-No-No without comment-Abstain-Ballot not returned).

**StdC VOTE:** 22-0-1<sup>32</sup>, CNV

32. It is recommended that BSR/ASHRAE Addendum I (*provides requirements for installation of a carbon monoxide alarm*) to ANSI/ASHRAE Standard 62.2-2010, *Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings*, be approved for publication.

**BACKGROUND:** There are no negative project committee (PC) voters. There are two unresolved commenters on the first public review, Ted Williams and Richard Roberts. Mr. Williams stated: “In discussion of my comments at the IAQ Subcommittee meeting that preceded the full 62.2 Committee vote on my comment, it was clear that the Subcommittee does not understand the normal restrictions on standards actions imposed by the standard's title, purpose & scope (TPS) and the importance of TPS development and approval. Subcommittee comments stated that the approved TPS did not state a restriction on the incorporation of the proposal. However, since standards are not to be written in permissive language and cannot anticipate all types of provisions that would need to be excluded, the statement of the TPS sets the boundaries of the standard. No provisions that are not clearly authorized by the TPS can be included in the standard. My comment reviews the approved terminology and why the proposal is not within the TPS, and my rationale was not addressed by the Subcommittee or in the rationale for disapproval of my comment. Also, the Subcommittee did not address the conflicts the proposal represents with other national consensus standards discussed at the meeting that clearly have scopes that cover the proposal.” Per the Chair of SSPC 62.2, the issues of whether requirement of carbon monoxide alarms is within the scope of Standard 62.2 and whether the requirements conflicted with other national consensus standards were discussed at four main committee meetings of SSPC 62.2 (including all meetings at which the committee took standards action or responded to public review comments on addendum I) and Mr. Williams was in attendance at all but the last one of those meetings (the meeting at which the committee responded to the second

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<sup>32</sup> Craig Wray abstained because he works with a member of SSPC 62.2.

public review comments). The specific scope-related and potential-conflict issues cited in Mr. Williams' statement were all included in those discussions. NOTE: Mr. Williams submitted the same comment on the second public review ISC (independent substantive change) and did not reply to the committee response and is therefore listed as resolved. Mr. Robert's request was to add a reference to NFPA 720. In response to Mr. Roberts' comment the committee added a reference NFPA 720, *Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment*, and Mr. Roberts indicated that he was resolved. The project committee voted in favor of publication 15-0-0-3-2, CV (Yes-No-No without comment-Abstain-Ballot not returned).

**StdC VOTE:** 21-0-2<sup>33</sup>, CNV

33. It is recommended that BSR/ASHRAE Standard 145.2P, *Laboratory Test Method for Assessing the Performance of Gas-Phase Air Cleaning Systems: Air Cleaning Devices*, be approved for publication.

**BACKGROUND:** There is one negative voter, William Lull. There are no unresolved commenters. Mr. Lull objects to the fact that the test method only requires testing against a single gas rather than the combination of gases that he perceives would be most useful for the majority of applications. The project committee voted in favor of publication 13-1-0-0-0, CV (Yes-No-No without comment-Abstain-Ballot not returned).

**StdC VOTE:** 23-0-0, CNV

34. It is recommended that BSR/ASHRAE/ASHE Addendum *h* (clarifies the use of recirculating units through modifications to four parts of the standard) to ANSI/ASHRAE/ASHE Standard 170-2008, *Ventilation of Health Care Facilities*, be approved for publication.

**BACKGROUND:** There are no unresolved commenters. There is one negative voter, Chris Rousseau. Mr. Rousseau stated: "There are probably ways to achieve the goals of the addendum with more direct language than is proposed in the addendum." The project committee voted in favor of publication 12-1-0-1-2, Chair Abstained (Yes-No-No without comment-Abstain-Ballot not returned).

**StdC VOTE:** 23-0-0, CNV

35. It is recommended that BSR/ASHRAE/USGBC/IES Addendum *f* (changes to the renewable energy requirements in Standard 189.1-2009) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.

**BACKGROUND:** There are no unresolved commenters. There are five negative PC votes: Ron Burton, Lance DeLaura, Anthony Floyd, Gregg Gress, and Lawrence Schoen. Mr. Schoen was concerned with language being vague and unenforceable, that requirements differed for single story buildings, the renewable ready requirement is unattainable for many multi-story buildings, and the addendum will force the purchase of Green-E power generated off site. Mr. Burton, Mr. DeLaura, and Mr. Floyd agreed with some of the arguments stated by Mr. Schoen. Mr. Gress was concerned that Sections 7.4.1.1, *Roofs*, and 7.3.2, *On-Site Renewable Energy Systems*, are not in harmony regarding the roof area calculation for single story buildings (i.e. one is based on roof area and the other on unstated area). The project committee voted in

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<sup>33</sup> Craig Wray abstained because he works with a member of SSPC 62.2. Allan Fraser abstained without comment.

favor of publication 22-5-0-1-11, Chair Abstained (Yes-No-No without comment-Abstain-Ballot not returned).

**StdC VOTE:** 22-0-1<sup>34</sup>, CNV

36. It is recommended that BSR/ASHRAE/USGBC/IES Addendum I (improves clarity related to heat island reduction provisions) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.

**BACKGROUND:** There are no unresolved commenters. There is one negative project committee voter, Ron Burton. Mr. Burton stated: “I do not believe sufficient justification for this change is outlined in the Rationale. I see no reference to specific studies or scientific data that would support this change and it seems to me that the SSPC should demand such justification for all modifications to the current Standard, especially ones that would leave us to “assume” the benefits are valid.” The project committee voted in favor of publication 24-1-0-3-12, Chair Abstained (Yes-No-No without comment-Abstain-Ballot not returned).

**StdC VOTE:** 22-0-1<sup>35</sup>, CNV

**Consent Motions 37-45 had no negative votes. These motions cover withdrawal of PAGA while moving the rules specific to guidelines to the Rules of the Board (ROB), updating language in the ROB to mirror the Society Bylaws, adding an International Dissemination Travel Grant Program to the ROB, moving the Model Research Agreement Grant to the RAC MOP, requesting Tech Council to provide policy guidance to SSPC 90.2, and approving the development of two new ASHRAE Method of Test Standards.**

37. It is recommended that the *Procedures for ASHRAE Guidelines Actions (PAGA)* be withdrawn and Rules of the Board (ROB) 2.425.003.1, *General Requirements*, ROB 2.425.003.3, ROB 2.425.003.6 and ROB 2.425.004 be approved as shown in [Appendix OS-A](#).

**BACKGROUND:** The current procedures in PAGA are the same as those included in *Procedures for ASHRAE Standards Actions (PASA)* with three exceptions; first, balance is desired but not required on guideline project committees; second, consensus is desired but not required; third, guidelines are not processed through ANSI. In an effort to streamline the procedures documents it is being recommended that PAGA be withdrawn and that the exceptions for processing be added to the Rules of the Board, those being the exceptions of balance and not processing guidelines through ANSI. While the rules currently indicate that consensus is desired but not required, it will be proposed that all ASHRAE guidelines be required to meet consensus. Also included in this motion is an updated reference to another portion of the Rules of the Board.

**TechC Vote:** 9-0-0, CNV

38. It is recommended that Rules of the Board 2.425.001, *Scope and Purpose* be approved as shown in [Appendix OS-B](#).

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<sup>34</sup> Bogi Setty abstained because he is a member of SSPC 189.1.

<sup>35</sup> Bogi Setty abstained because he is a member of SSPC 189.1.

**BACKGROUND:** This motion makes ROB 2.425.001 consistent with Society Bylaw 7.9, Standards Committee.

**TechC VOTE:** 9-0-0, CNV

39. It is recommended that Rules of the Board (ROB), Volume 2: *Standing Rules – General Rules, Board, Council and Committees*, be modified as indicated below.

**VOLUME 2 - RESEARCH ADMINISTRATION COMMITTEE**

2.421.004.7 Awards (07-06-27-33)

- A. This committee shall select one student from an eligible institution as the recipient of the annual Homer Addams Award in accordance with the ROB and RAC MOP. (64-06-28-44/71-08-25-14/83-06-26/92-01-30-61/99-01-28-66)
- B. This committee shall select the annual recipient of the Service to ASHRAE Research Award in accordance with the ROB and RAC MOP.
- C. This committee shall implement the annual grant-in-aid program in accordance with the ROB and RAC MOP.
- D. This committee shall have the option of selecting annually the recipient of an annual ASHRAE New Investigator Award to (a) enhance the academic careers of recent Ph.D. recipients, (b) promote research related to the goals of ASHRAE in universities and colleges, and (c) promote educational efforts related to the goals of ASHRAE. (520-162-013) (99-01-28-66)
- E. This committee shall have the option of selecting up to ten grant recipients of the ASHRAE Research - International Dissemination Travel Grant Program annually in accordance with the ROB, RAC MOP and RAC Reference Manual.
- F. This committee shall have the option of selecting annual recipients of ASHRAE Annual Innovation Research Grants in accordance with the ROB, RAC MOP and RAC Reference Manual.

**BACKGROUND:** The ASHRAE Innovative Research Grant is proposed to provide seed funding for novel research deemed to have the potential to significantly advance the state-of-the-art in heating, ventilating, air-conditioning and refrigeration engineering. The idea is to encourage out-of-the-box research to complement the research proposed and guided by technical committees.

The intent is to fund one (1) award each year subject the following conditions:

- Suitability of Proposals - A competitive process will be used to evaluate research proposals. If, in a given year, there are no proposals that meet the criteria for the award, an award will not be made.
- Funding Constraints - The amount of research funding available for initiating new research projects is highly variable from one year to the next. When research funds are limited, ASHRAE's Research Administration Committee (RAC) may opt to forego requesting proposals for this grant.

The Innovative Research Grant will have very little oversight from ASHRAE and is intended to enable the investigator to perform enough work to complete an initial evaluation of the feasibility of a new concept, process, methodology, technology, etc. Projects producing

promising results could lead to additional research on a larger scale through a unresolved research proposal (URP) or a TC-sponsored Research Topic Acceptance request (RTAR) and work statement.

The other proposed change gives RAC the authority NOT to award the ASHRAE New Investigator Award (NIA) in a given year if all NIA applicants fail to meet a minimum review score.

The ASHRAE Research Dissemination Travel Grant Program is proposed to support Direction 3 of the ASHRAE Strategic Plan. The new international travel grant award program will be paid from the research fund, and offered to the principal investigators of ASHRAE sponsored research projects

**FISCAL IMPACT:** The Innovation Award would carry a base grant of \$50,000 per year for two years, with an additional \$25,000 available in the third year if it is matched by an industrial contributor. The maximum award from ASHRAE would be \$125,000 and the maximum available to the recipient would be \$150,000. The industrial support must be from industries engaged in activities related to ASHRAE's areas of interest. If, in a given year, there is sufficient funding available and more than one outstanding proposal is received, the RAC has the discretion to fund a second award carrying the same value of \$50,000 per year for two years, with an additional \$25,000 available in the third year if it is matched by an industrial contributor. This has been budgeted.

The Travel Grant would have a \$25,000 Annual Maximum from Research Fund. This has been budgeted.

**TechC VOTE: 9-0-0, CNV**

40. It is recommended that ROB Volume 2: *Standing Rules – General Rules, Board, Council and Committees*, be modified as indicated below.

## **RESEARCH ADMINISTRATION COMMITTEE**

### **2.421.006 MANUALS AND PROCEDURES**

2.421.006.1 This committee is responsible for reviewing, recommending changes and interpreting the following:

- A. Model Research Agreement
- B. Recommended Qualifications for new RAC Members
- C. Research Strategic Plan

**BACKGROUND:** RAC has been and will continue to be responsible for developing and maintaining the Research Strategic Plan.

**TechC VOTE: 9-0-0, CNV**

41. It is recommended that ROB Volume 2: *Standing Rules – General Rules, Board, Council and Committees*, and Volume 3: *Manual of Procedures for Officers and Directors of the Rules of the Board*, be modified as indicated in [Appendix OS-C](#)

**BACKGROUND:** In the spirit of council empowerment, the proposed changes will remove the Model Research Agreement from Volumes 2 and 3 of the ROB so that it can be moved to the RAC MOP, where all proposed changes to the agreement will be reviewed and approved by Technology Council with the concurrence of ASHRAE legal counsel.

**TechC VOTE:** 9-0-0, CNV

42. It is recommended that ROB Volume 2: *Standing Rules – General Rules, Board, Council and Committees*, be modified as indicated below.

**2.303.002 Research Agreement**

This council monitors, approves and maintains the —Model Research Agreement

**2.303.008 Policies, Manuals and Procedures**

This council is responsible for reviewing, recommending changes and interpreting the following:

- Standards Development Policy
- Procedures for ASHRAE Standards Actions (PASA)
- Procedures for ASHRAE Guidelines Actions (PAGA)
- Procedures for Developing ASHRAE Position Documents and Position Statements
- Guidelines for Developing ASHRAE Position Briefs
- All Position Documents and Position Statements
- ~~Model Research Agreement~~

**BACKGROUND:** The proposed change corrects a contradiction that currently exists between ROB 2.303.002 and ROB 2.303.008 regarding the approval authority that Technology Council has over the Model Research Agreement.

**TechC VOTE:** 9-0-0, CNV

43. It is recommended that ROB Volume 2: *Standing Rules – General Rules, Board, Council and Committees* be modified as indicated below.

**ROB**

**RESEARCH ADMINISTRATION COMMITTEE**

**2.421.004 OPERATION**

2.421.004.1 General Requirements

- D. This committee shall cooperate with the Technical Committees, Task Groups, Multidisciplinary Task Groups w/research authority, Environmental Health Committee, Refrigeration Committee, and Standing Standards Project Committees to plan, develop, contract, monitor and disseminate the results of research and technical projects in accordance with RAC guides. The Technical Committees, Task Groups, Multidisciplinary Task Groups w/research authority, Environmental Health Committee, Refrigeration Committee, and Standing Standards Project Committees shall be responsible for the technical content of the projects. This committee shall review and monitor the work of the Technical Committees, and Task Groups, Multidisciplinary Task Groups w/research authority, Environmental Health Committee, Refrigeration Committee, and Standing Standards Project Committees to ensure that said projects are consistent with the Society's research objectives and that ASHRAE procedures have been followed. (99-01-28-65/07-06-27-30)

**BACKGROUND:** The proposed change would allow the Refrigeration committee and Multidisciplinary Task Groups (MTGs) that have been granted research authority in their scope the authority to initiate, monitor and approve ASHRAE research projects.

**TechC VOTE:** 9-0-0, CNV

44. It is recommended that the following Title, Purpose and Scope (TPS) be approved and that a new Standard Project Committee be formed:

**TITLE:** Laboratory Method of Test of Fault Detection and Diagnostics Applied Commercial Air-Cooled Packaged Systems

**PURPOSE:**

This standard provides a method to define an FDD tool's function. This standard also provides a method of laboratory test for the performance of Fault Detection and Diagnostic (FDD) tools on commercial air-cooled packaged equipment.

**SCOPE:**

2.1 This standard applies to commercial air-cooled packaged air conditioning systems.

2.2 The test is a physical laboratory test on a particular combination of diagnostic tool for each model of a unitary system.

2.3 This standard applies to any on-board, after-market or hand-held hardware and/or software functionality that detects and/or diagnoses problems that lead to degraded performance such as, energy efficiency, capacity, increased maintenance costs or shortened equipment life.

**BACKGROUND:** This TPS was submitted by Kristin Heinemeier for consideration at the Montreal PPIS meeting. PPIS assigned TC 7.5 as the cognizant TC. Ms. Heinemeier was recommended as the Chair of the proposed new project committee. There are at least five additional members willing to volunteer. There are 11 proposed TC members and two binternational members interested in serving.

**StdC VOTE:** 22-0-0, CNV

45. It is recommended that the following Title, Purpose and Scope (TPS) be approved and that a new Standard Project Committee be formed:

**TITLE:** Method of Test for Determining Hydronic System Balance Valve Capacity

**PURPOSE:** This standard provides standard capacity test procedures, definitions and requirements for valve calibration, and reporting of operational characteristics.

**SCOPE:** This standard applies to manual and automatic balancing valves utilized in hydronic HVAC and building plumbing systems. This standard also applies to pressure independent control valves and actuated and non-actuated valves.

**BACKGROUND:** This TPS was submitted by Mark Hegberg for consideration at the Montreal PPIS meeting. PPIS assigned TC 6.1 as the cognizant TC. TC 7.7 also voted 8-0-0 (CNV) to

support this TPS. Mr. Hegberg was recommended as the Chair of the proposed new project committee. There are at least five additional members willing to volunteer.

**StdC VOTE:** 22-0-0, CNV



46. It is recommended that the Board of Directors direct Technology Council to provide guidance to Standards Committee and SSPC 90.2 to position Standard 90.2 as a leadership standard. The Council will consider increased energy efficiency, sustainability and health and safety.

**BACKGROUND:** ANSI/ASHRAE Standard 90.2, *Energy Efficient Design of Low-Rise Residential Buildings* was originally conceived as a minimum standard for energy efficiency of low-rise residential buildings analogous to ANSI/ASHRAE/IES Standard 90.1 for non-residential buildings. Unlike Standard 90.1, Standard 90.2 has not been mandated as the benchmark for residential energy codes and has struggled for relevance. A Presidential ad hoc committee convened in 2008 to review the status of ASHRAE residential ventilation and energy standards considered a motion to hold a withdrawal review of 90.2. In reporting the failure of this motion, the ad hoc report stated, “*It was determined that a better option would be to determine how to improve the standard rather than put it out for withdrawal public review at this time. However, there was agreement that SSPC 90.2 cannot continue to work as they currently are (emphasis added).*”

Based on guidance from the board of directors, a work plan for 90.2 was ultimately adopted that included the following goals, based on the final report of the *ad hoc* submitted in March 2009:

- To create a standard that is at least 30 percent more energy efficient than 2006 IECC and meets current ASHRAE SSPC 90.2 criteria for cost-effectiveness and technical feasibility.
- To create a standard that is at least equivalent in energy efficiency to the 2009 IECC and meets current ASHRAE criteria for cost-effectiveness and technical feasibility.

A revision based on these goals (and others) is underway. An Advisory Public Review was conducted during spring 2011 during which many comments critical of the stringency of the draft were received. It has been suggested that the revised standard will be less stringent than IECC 2012. Quoting again from the ad hoc report:“(T)o impact the residential market, it is not enough for Standard 90.2 to merely meet what the IECC provides. If Standard 90.2 is to become a relevant participant in the residential market, it must provide its audience with products that satisfy its audience’s needs and surpass its competitors.”

It is clear that the current strategic direction for 90.2 has not achieved its intent, by this criterion. Additional comments on the current revision indicate a desire for setting more stringent targets for 90.2 and also, perhaps, taking into consideration other measures of performance than energy. Without setting specific quantitative goals, this motion provides the direction necessary to set in motion a process to establish goals that achieve the intent of the 2009 Ad Hoc recommendation.

**TechC VOTE:** 9-0-0, CNV

## Information Items:

1. The following are the anticipated publication dates for current special project documents:
  - *Advanced Energy Design Guide for K-12 School Buildings (50% Savings)* – October 2011
  - *Energy Efficient Guide for Existing Commercial Buildings: Technical Implementation* – November 2011
  - *Advanced Energy Design Guide for Medium-Big Box Retail Buildings (50% Savings)* – January 2012
  - *Advanced Energy Design Guide for Large Hospitals (50% Savings)* – May 2012
  - PMP Best Practices Guide (Final title TBD) – June 2012
2. The Standards Committee has successfully launched its phase two of the online comment database just prior to this meeting and successfully demonstrated the changes at the PC Chair's breakfast.
3. Technology Council approved drafts of the *Ozone Depleting Substances (ODS) Position Document*, the *Natural Refrigerants Position Document*, and the *Indoor Air Quality Position Document*, which will be submitted later to the Board of Directors.
4. Technology Council will be working with Publishing and Education Council, to support the ability of members of active Project Committees (PCs) to access and download published ASHRAE Standards Committee Document (SCDs - standards, guidelines and addenda) relevant to their use in the development or revision of ASHRAE SCDs. Standards Committee believes that the cost for this should not come from the Standards Committee budget.

**2.425.003 OPERATION**

## 2.425.003.1 General Requirements

- A. This committee shall plan and implement activities in support of ASHRAE Policy on Use of ASHRAE Standards in Building Codes (ROB 400-446-0051.201.003), ~~especially clauses 1, 2 and 6.~~ (98-01-16-41)
- B. This committee shall, as the standards coordinating committee of an ANSI-accredited organization, submit its Procedures for ASHRAE Standards Actions (PASA), and all changes, to ANSI for approval. (See 5.4.) (95-02-02-54)
- C. ASHRAE Standards Committee documents shall be developed in accordance with the ~~Standards Development and Approval Process – Appendix A (00-06-25-09)~~ the Procedures for ANSI Standards Action except that balance on guideline project committees is not required but desired.
- D. Adoption, revision, reaffirmation or withdrawal of a standard or guideline shall require approval of the Board of Directors, and the Board of Directors will determine that ASHRAE's procedures have been followed. The effective date of a new, revised or reaffirmed standard, guideline or addendum shall be in accordance with the following unless otherwise approved by the Board of Directors
  - 1. For a new standard the date of Board approval of the standard.
  - 2. For a revised standard, which is intended to replace an ANSI-approved American National Standard the date of ANSI approval of the revised standard. If such standard fails to achieve ANSI approval, the effective date will be determined by the Board, subsequent to the failure to achieve ANSI approval.
  - 3. For a revised standard which will replace an ASHRAE standard which is not an -approved American National Standard, the date of Board approval of the revised standard.
  - 4. For an addendum to an ANSI-approved American National Standard that is not code intended, the date of ANSI approval of the addendum. For an addendum to an ANSI-approved American National Standard that is code intended, the date of publication announced on the ASHRAE website. If such addendum fails to achieve ANSI approval, the effective date will be determined by the Board, subsequent to the failure to achieve ANSI approval. (10-10-23-02)
  - 5. For an addendum to an ASHRAE standard, which is not an ANSI-approved American National Standard the date of Board approval.
  - 6. For a new, revised or reaffirmed guideline or addendum to a guideline the date of Board approval of the document.(99-01-28-73)

**2.425.003.3**

98-01-18-02/05-06-30-27

- A. All ASHRAE standards shall be submitted for ANSI approval as American National Standards.
- B. ASHRAE may obtain ANSI approval either by utilizing its ANSI Audited Designator status or by submitting to the ANSI Board of Standards Review for approval. Unless otherwise specified by the Board of Directors, the Audited Designator path will be used. (04-07-01-45)
- C. Following approval by the Board of Directors, an announcement of approval and availability of each standard, guideline, revision or reaffirmation thereof, or withdrawal of a standard or guideline shall be made. (67-06-25-08/86-001-23-56/88-05-21-49/00-06-25-7B)
- D. Appeals (95-02-02-54)
  - 1. Appeals of the Society's action in relation to ASHRAE standards or addenda shall be conducted in accordance with the Procedures for ASHRAE Standards Actions (PASA).
  - 2. Appeals of the Society's action in relation to ASHRAE guidelines or addenda shall be conducted in accordance with the ~~Procedures for ASHRAE Guidelines Actions (PAGA).~~ Procedures for

ASHRAE Standards Action (PASA) except that guidelines are not submitted to ANSI for approval or appeals.

- E. The development and publication of standards and guidelines are intrinsic to the objectives of ASHRAE as stated in the Bylaws (Article I, Section 1.3). The responsibility for ASHRAE Standards including their technical content and conformance to published consensus procedures rests with the American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc.

2. **2.425.003.6** 520-170-006 67-06-25-08/86-01-23-56/88-05-21-49

- A. In cooperation with other organizations in the adoption of standards, guidelines, or revisions thereof, not promulgated solely by or proprietary to this Society, the Standards Committee may appoint an individual to represent the Society in a specific standards area. The appointed representative of this Society shall vote on the adoption as directed by the Standards Committee, provided, however, and through regular reports, the Board of Directors has been advised, and has approved in advance the character, scope, and general content of the standard or guideline. Conduct of the representatives shall be governed by the Standards Committee's Guide for ASHRAE Representatives to Standards-Related Committees of Other Organizations (see ROB 100-115-001 and Standards Committee MOP, Appendix D). (67-06-25-08/86-01-23-56/88-05-21-49)
- B. The Standards Committee may not endorse standards prepared by others without formal Society participation, except in the case of standards being processed through the American National Standards Institute and National Fire Protection Association, but the Society will consider processing standards prepared by others, and if found acceptable without change, or with mutually-agreeable revisions, may issue them either as Society standards or jointly with the recommending agencies. (64-01-29-25/98-06-25-27)
- C. Standards and Guidelines shall follow Society policy in regard to use of metric units (Appendix C).
- D. Formation of all new standard project committees and titles, purposes and scopes, shall be approved by the Board of Directors or its designee before the project committees take action. (98-01-16-22B/00-06-25-7B)
- E. Voting
  - 1. Voting may be conducted during meetings or by letter ballot. Votes taken at meetings shall be decided by a majority of those voting. Letter ballots require a majority of the committee's voting membership. More stringent voting requirements for selected types of actions may be specified in the Procedures for ASHRAE Standards Actions (PASA) ~~and the Procedures for ASHRAE Guidelines Actions (PAGA)~~. (95-02-02-54)
  - 2. The committee shall record the number of votes, including abstentions, on all motions.

#### **2.425.004 POLICY ON STANDARDS COMMITTEE DOCUMENT DEVELOPMENT**

520-170-011 99-06-20-13B/00-06-25-7B/03-01-30-54A(8)/10-01-27-01/10-06-30-21

2.425.004.7

Before a draft standard or guideline is released for public review, consensus shall have been achieved within ASHRAE.

**2.425.001 SCOPE AND PURPOSE**

The Standards Committee shall be responsible for the selection, development, preparation, and submittal to the BOD of all code ~~language documents~~, standards and guidelines and addenda in the fields of heating, refrigerating, air conditioning, and ventilating engineering, including all revisions, re-affirmations or withdrawals thereof, to be considered for approval. It shall cooperate with and supervise the Society's participation in other organizations in the development, preparation, and adoption of codes, standards and guidelines. (SBL 7.9)

**VOLUME 2**  
**STANDING RULES**  
**COUNCILS**  
**TECHNOLOGY COUNCIL**  
**510-102-001**

**2.303.002 Research Agreement**

This council monitors, approves and maintains the —Model Research Agreement

**2.303.008 Policies, Manuals and Procedures**

This council is responsible for reviewing, recommending changes and interpreting the following:

Standards Development Policy

Procedures for ASHRAE Standards Actions (PASA)

Procedures for ASHRAE Guidelines Actions (PAGA)

Procedures for Developing ASHRAE Position Documents and Position Statements

Guidelines for Developing ASHRAE Position Briefs

All Position Documents and Position Statements

~~Model Research Agreement~~

**RESEARCH ADMINISTRATION COMMITTEE**

(520-162)

2.421.004.5 Model Research Agreement

A. Research contracted by ASHRAE will be conducted under the Model Research Agreement ~~dated July 1, 2002.~~ (Appendix A) (RAC MOP ~~ROB 3.930~~)

B. Research contracts that include changes in the Model Research Agreement affecting the type of agreement, cost, publication rights, intellectual property and legal exposure to the Society shall be recommended by the Manager of Research, Director of Technology, Executive Vice President, and, after consultation with legal counsel, approved by the Executive Committee. Other changes may be made at the discretion of the Manager of Research. (64-10-09-09/88-05-21-51/99-01-28-65/02-06-27-31/07-06-27-32)

**2.421.006 MANUALS AND PROCEDURES**

This committee is responsible for reviewing, recommending changes and interpreting the following:

Model Research Agreement

**VOLUME 3**

**MANUALS and PROCEDURES**

**3.900 MISCELLANEOUS PROCEDURES**

**3.910 Staff Manual**

**TECHNOLOGY DEPARTMENT**

Research Administration

Staff is directed by the BOD, upon recommendation of the Research Administration Committee and Technology Council, to maintain a *Model Research Agreement* for Technology Council ~~BOD~~ approval with the concurrence of ASHRAE legal counsel. (67-02-02-06/84-02-02-33) (Model Research Agreement is in RAC MOP – Appendix A ~~ROB Volume 3.~~)

~~**3.930 Model Research Agreement** (09-06-24-18)~~

**RESEARCH AGREEMENT**

~~This Research Agreement (the “Agreement”) with an effective date of XXX is between American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc., (the “Society”) with a principal place of business at 1791 Tullie Circle, NE, Atlanta, GA 30329 and (the “Institution”) XXX, with a principal place~~

~~of business at XXXX.~~

~~Whereas, the Society has indicated a desire to undertake a research project relating to "XXX; and,~~

~~WHEREAS, the Institution represents that they have the necessary knowledge, expertise and capability to perform the Services;~~

~~NOW, THEREFORE, the parties hereto, in consideration of the mutual promises and undertakings herein contained do hereby mutually promise and agree as follows:~~

#### ~~ARTICLE I STATEMENT OF WORK~~

~~The Institution shall perform the Services described in the proposal entitled, "XXX)," dated XXX. The proposal is hereby made a part of this Agreement by reference and designated Appendix A.~~

#### ~~ARTICLE II TYPE OF AGREEMENT~~

~~This Agreement shall be a fixed sum contract in the amount of \$XXX which shall include, but not necessarily be limited to: actual direct labor, materials, travel, subcontracts, employee benefits, general and administrative expenses and overhead, as specified in the proposal.~~

#### ~~ARTICLE III PERIOD OF PERFORMANCE~~

~~The period of performance shall be from XXX to XXX unless terminated at an earlier date pursuant to the general provision of GENERAL CONDITION IX, TERMINATION, or extended to a later date in accordance with GENERAL CONDITION V, CHANGES IN SCOPE OF SERVICES.~~

#### ~~ARTICLE IV PAYMENTS~~

~~During the period of performance, the Society agrees to pay the sum of \$XX to the Institution in [(A)] equal installments of \$[B]. The first installment shall be paid on or within thirty days after the execution of the Agreement. Subsequent payments shall be made within thirty days of the Society's acceptance of Progress and Financial Reports described in GENERAL CONDITION IV, DELIVERABLES, during the term of the Agreement. In addition, a payment of \$XX shall be made contingent upon submission of the Final Report described in GENERAL CONDITION IV, and the final payment of \$XX shall be made contingent upon completion of all Services, the acceptance of the Final Report and the receipt of the Research or Technical Paper described in GENERAL CONDITION IV.~~

~~Payment of each installment, except the first and final two, shall be contingent upon receipt and acceptance, in the Society's sole discretion, of the Progress Reports described in GENERAL CONDITION IV.~~

#### ~~ARTICLE V COMPLETE AGREEMENT~~

~~This Agreement plus the attached GENERAL CONDITIONS I through XVII constitute the complete agreement of the parties hereto with respect to the Services listed herein and supersedes all prior statements oral or written. This Agreement may be modified only by mutual written agreement of the parties.~~

~~IN WITNESS WHEREOF, the said parties have caused their corporate names and seals to be affixed hereto by the duly authorized officers.~~

~~AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS,  
INC.~~

Name: \_\_\_\_\_ Name: \_\_\_\_\_

Date: \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_\_ Jeff H. Littleton \_\_\_\_\_  
Title: President Title: Executive Vice President

(Seal)

INSTITUTION

Name:

Date:

Title:

(Seal)

## GENERAL CONDITIONS

### GENERAL CONDITION I – WORK PERFORMANCE

~~The Institution shall perform the Services by the utilization of its best efforts, in a workmanlike manner by qualified personnel, in accordance with standard scientific and technical procedures, and practices.~~

### GENERAL CONDITION II – LIMITATION OF OBLIGATION

~~Neither party shall be obligated to incur costs (excluding any previously agreed to shared amount) beyond those shown in ARTICLE II, unless agreed to in writing by the parties.~~

### GENERAL CONDITION III – DISBURSEMENTS

~~The Institution agrees that disposition of the funds paid them for the Services shall be generally in accordance with that outlined in the Application for Grant of Funds previously submitted by the Institution and attached hereto. No expenditures in excess of \$1,000.00 beyond that so defined in the proposal shall be made for equipment or supplies except on written approval by the Society's Manager of Research and Technical Services.~~

### GENERAL CONDITION IV – DELIVERABLES

~~Progress, Financial and Final Reports, Research or Technical Paper(s), and Data shall constitute the only deliverables (“Deliverables”) under this Agreement and shall be provided as follows:~~

#### ~~a. — Progress and Financial Reports~~

~~Progress and Financial Reports, in a form approved by the Society, shall be made to the Society through its Manager of Research and Technical Services at quarterly intervals; specifically on or before each January 1, April 1, June 10, and October 1 of the contract period.~~

~~Furthermore, the Institution's Principal Investigator, subject to the Society's approval, shall, during the period of performance and after the Final Report has been submitted, report in person to the sponsoring Technical Committee/Task Group (TC/TG) at the annual and winter meetings, and be available to answer such questions regarding the research as may arise.~~

#### ~~b. — Final Report~~

~~A written report, design guide, or manual, (collectively, “Final Report”), in a form approved by the Society, shall be prepared by the Institution and submitted to the Society's Manager of Research and Technical Services by the end of the Agreement term, containing complete details of all research carried out under this Agreement. Unless otherwise specified, six copies of the final report shall be furnished for review by the Society's Project Monitoring Subcommittee (PMS).~~

~~Following approval by the PMS and the TC/TG, in their sole discretion, final copies of the Final Report will be furnished by the Institution as follows:~~

- ~~— An executive summary in a form suitable for wide distribution to the industry and to the public.~~
- ~~— Two bound copies~~
- ~~— One unbound copy, printed on one side only, suitable for reproduction.~~
- ~~— Two copies on CD-ROM; one in PDF format and one in Microsoft Word.~~

e. ~~HVAC&R Research or ASHRAE Transactions Technical Papers~~

~~One or more papers shall be submitted first to the ASHRAE Manager of Research and Technical Services (MORTS) and then to the “ASHRAE Manuscript Central” website based manuscript review system in a form and containing such information as designated by the Society suitable for publication. Papers specified as deliverables should be submitted as either Research Papers for HVAC&R Research or Technical Paper(s) for ASHRAE Transactions. Research papers contain generalized results of long term archival value, whereas technical papers are appropriate for applied research of shorter term value, ASHRAE Conference papers are not acceptable as deliverables from ASHRAE research projects. The paper(s) shall conform to the instructions posted in “Manuscript Central” for an ASHRAE Transactions Technical or HVAC&R Research papers. The paper title shall contain the research project number (XXXX RP) at the end of the title in parentheses, e.g., (XXXX RP).~~

~~All papers or articles prepared in connection with an ASHRAE research project, which are being submitted for inclusion in any ASHRAE publication, shall be submitted through the Manager of Research and Technical Services first and not to the publication's editor or Program Committee.~~

d. ~~Data~~

~~Data is defined in General Condition VI, “DATA”~~

e. ~~Project Synopsis~~

~~A written synopsis totaling approximately 100 words in length and written for a broad technical audience, which documents 1. Main findings of research project, 2. Why findings are significant, and 3. How the findings benefit ASHRAE membership and/or society in general shall be submitted to the Manager of Research and Technical Services by the end of the Agreement term for publication in ASHRAE Insights~~

~~The Society may request the Institution submit a technical article suitable for publication in the Society's ASHRAE JOURNAL. This is considered a voluntary submission and not a Deliverable. Technical articles shall be prepared using dual units; e.g., rational inch pound with equivalent SI units shown parenthetically. SI usage shall be in accordance with IEEE/ASTM Standard SI-10.~~

#### GENERAL CONDITION V – CHANGES IN THE SCOPE OF SERVICES

~~The Society or the Institution may, at any time, by written request suggest changes to the scope of Services, including but not limited to (a) revising, adding or deleting from the Services, or (b) revising the period of performance. Such request will be incorporated into this Agreement by mutual consent in writing. If any changes in the Scope of Services result in an increase or decrease in the total cost for the Services, the fixed sum described in ARTICLE II will be adjusted before such change becomes effective.~~

#### GENERAL CONDITION VI – DATA

~~The Institution agrees to maintain true and complete books and records, including but not limited to notebooks, reports, charts, graphs, analyses, computer programs, visual representations etc., (collectively, the "Data"), generated in connection with the Services. Society representatives shall have access to all such Data for examination and review at reasonable times. The Data shall be held in strict confidence by the Institution and shall not be released to third parties without prior authorization from the Society, except as provided by GENERAL CONDITION VII, PUBLICATION. The original Data shall be kept on file by the Institution for a period of two years after receipt of the final payment and upon request the Institution will make a copy available to the Society upon the Society's request.~~

#### ~~GENERAL CONDITION VII PUBLICATION~~

~~The intent of the parties is to make the results of the Services available to, and for the benefit of, the public. In view of their financial support of the Services, the Society shall own the exclusive rights to publication of all Data, Research or Technical Papers, Progress, Financial and Final Reports resulting from the project for the shortest of the following periods:~~

- ~~a. ——— Until the Society gives the Institution written permission to publish the results, or~~
- ~~b. ——— Until the Research or Technical Paper described in GENERAL CONDITION IV, DELIVERABLES, is published, at which time the paper or derivative paper based on data resulting from the Services, may be published by the Institution with acknowledgement to the Society, or~~
- ~~c. ——— Until the period of one year has passed from the submission of said Research or Technical Paper to the Society at which time the paper or derivative paper based on data resulting from the Services, may be published by the Institution with acknowledgement to the Society,~~

~~Prior to publication by either party, the Institution may catalog and place theses or reports of the Services in the Institution's library for research and reference purposes.~~

~~The cooperative character of the investigation shall be recognized in each text, on the title page or on the cover of the Final Reports, Research or Technical Papers or other published accounts of the Services by including the following annotation: "Results of Cooperative Research between the American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc., and [Name of Institution]."~~

~~Prior to the Institution's offering for sale or distribution any book, manual, guide, software, or other such product of commercial value created in connection with the Services, the Institution and/or the Principal Investigator shall enter into a royalty or publication agreement with the Society.~~

~~The Institution may not use the ASHRAE name or logo in any manner which may imply the Society's endorsement of any publication or software resulting from the Services without prior written permission from the Society.~~

#### ~~GENERAL CONDITION VIII PATENTS~~

~~The Institution agrees to promptly disclose any patentable or copyrightable inventions resulting from the Services to the Society and will assist the Society in seeking a patent(s) with respect to such inventions. Alternatively, the Society may permit the Institution to seek a patent provided: (i) the Institution executes all documents necessary to obtain such patent; (ii) the Institution grants to the Society, a worldwide, non-exclusive, irrevocable, sublicensable, royalty free license use for any purpose, the patented work; and (iii) the Institution shares its net income from such patent(s) with the Society in the portions 40% to the Society~~

~~and 60% to the Institution.~~

#### GENERAL CONDITION IX – TERMINATION

~~The Society shall have the right to terminate this Agreement upon 30 days' notice in writing to the Institution for any reason. If the Society exercises this termination right, the Institution agrees to stop all work to the extent specified in the notice and incur no further expenses beyond those authorized in such notice.~~

~~Likewise, the Institution shall have the right to terminate this Agreement upon 30 days' notice in writing to the Society for any reason. If the Institution exercises this termination right, the Institution agrees to stop all work immediately upon the date notice is given, except to the extent authorized by the Institution.~~

~~In the event of termination by either party, the Society will determine, in consultation with the Institution, the portion of the fixed sum earned to the date of termination. The Institution agrees, upon the Society's request, to complete the portion of the Services initiated prior to the notice of termination. The Society will pay the Institution for such Services and any agreed upon expenses up to the fixed sum of the Agreement stated in Article II, "TYPE OF AGREEMENT." Expiration, cancellation or termination of the Agreement under any circumstances will in no way be construed as a restriction, limitation or waiver of either party's rights to pursue any additional remedy (ies) at law or equity.~~

#### GENERAL CONDITION X – KEY PERSONNEL

~~The Institution agrees to assign the persons listed in the proposal to perform the Services for the time period and at the level of activity stated in the proposal. Should, for any reason, one or more of these persons be unavailable to carry out the assignment, the Institution shall, with prior approval of the Society, replace them with a person(s) of equal abilities and qualifications.~~

#### GENERAL CONDITION XI – STATUS, ASSIGNMENT

~~The Institution's status under this Agreement shall be that of an independent contractor and not that of an agent or employee. The Institution shall have no right or power to enter into any contract or commitment on behalf of the Society. The parties acknowledge that the identity and expertise of the Institution were and continue to be material circumstances upon which the Society relied in entering into this Agreement, and therefore this Agreement is not assignable by the Institution without the prior written consent of the Society.~~

#### GENERAL CONDITION XII – COPYRIGHT INFRINGEMENT

~~The Institution represents and warrants to the Society that any and all materials to be prepared under this Agreement for the Society do not and will not infringe upon the copyright, patent, or license or otherwise violate the proprietary rights of any person or entity. The Institution hereby agrees to indemnify and hold the Society harmless from and against all liability, loss, damage or injury and reasonable costs and expenses (including reasonable attorneys' fees and costs of any investigation or suit related thereto, and of any judgment under any such suit satisfying any claim described herein) arising from: (i) any misrepresentation by, or breach of the representations and warranties given by, the Institution herein, or from a breach of any covenant or warranty of the Institution contained in this Agreement, or from any misrepresentation in or omissions from any other instruments, or any breach of any covenant or warranty in any instrument, furnished or to be furnished by the Institution hereunder; or (ii) from any suit, action, proceeding, claim or investigation pending or threatened against or affecting the Institution or the Society which alleges any such infringement.~~

~~In the event there is such a claim, the Institution agrees to: (i) procure for the Society the continuing right to use of the material without restriction; (ii) replace the material which is the subject of an infringement claim with material of equal suitability, in the opinion of the Society, for the use to which the infringing material was used; or (iii) modify the material which is the subject of the infringement claim so that it is no longer subject to such a claim.~~

### GENERAL CONDITION XIII – INSURANCE

~~The Institution hereby represents and warrants to the Society, and agrees hereby to furnish the Society with a certificate proving compliance therewith, that it is presently conducting its business so as to comply in all respects with all applicable statutes, ordinances, rules, regulations and orders of any governmental authority with regard to Workers' Compensation Insurance coverage. Such coverage may take the form of a certificate of workers' compensation or proof of self insurance.~~

~~The Institution covenants and agrees to purchase and maintain, during the term of this Agreement Employer's Liability Insurance ("Insurance") in a minimum amount of One Million Dollars (\$1,000,000) for the injury or death of any one employee. The terms of such Insurance shall provide that the Society receive 30 days' written advance notice prior to the cancellation, termination, alteration or material change of any such Insurance coverage.~~

~~The Institution shall, at its own expense, purchase and maintain during the performance of this Agreement, Comprehensive Automobile Liability and Comprehensive General Liability Insurance with coverage and in such minimum amounts as provided below:~~

- ~~1. Comprehensive Automobile Liability insurance shall include coverage for owned, hired and non-owned vehicles and shall not be in an amount less than Three Hundred Thousand Dollars (\$300,000) combined single limit for any one occurrence.~~
- ~~2. Comprehensive General Liability insurance shall include coverage for personal injury, bodily injury and property damage for Premises Operations, and Products/Completed Operations Hazard. The amount of such insurance shall not be in an amount less than One Million Dollars (\$1,000,000) combined single limit for any one occurrence.~~

~~All insurance policies referred to herein shall include, by endorsement to the policy(ies), the Society as an "additional insured." The Institution shall incur the cost of any and all premiums and endorsements related to all types of insurance described herein.~~

~~Evidence of the coverage for each type of insurance described herein shall state that coverage provided is primary and is not excess or contributing with any insurance or self insurance maintained by the Institution.~~

~~The Society shall have the right to inspect or obtain a copy of the original policy(ies) of insurance. The Institution shall, if requested, furnish the required certificates and endorsements to the Society prior to commencing performance of the Services described herein. All insurance certificates, endorsements, cancellations, terminations, alterations and material changes of such insurance shall be issued and submitted to the following:~~

~~\_\_\_\_\_ Manager of Research and Technical Services  
\_\_\_\_\_ ASHRAE, Inc.  
\_\_\_\_\_ 1791 Tullie Circle, NE  
\_\_\_\_\_ Atlanta, GA 30329~~

GENERAL CONDITION XIV—INDEMNIFICATION

~~In connection with any and all third party actions, losses, claims, demands and damages arising in connection with the performance of this Agreement.~~

- ~~A. The Society agrees to indemnify and hold harmless the Institution, from and against any and all losses, claims, demands, and damages that may arise by reason of any acts or omissions on the part of the Society, its agents or employees, in performance of this Agreement, and shall assume full responsibility for the defense thereof, and upon its failure to do so on proper notice, the Institution reserves the right to defend such action and to charge all costs to the Society.~~
- ~~B. The Institution agrees to indemnify and hold harmless the Society, from and against any and all losses, claims, demands, and damages that may arise by reason of acts or omissions on the part of the Institution, its agents, employees, contractors and subcontractors, in performance of this Agreement, and shall assume full responsibility for the defense thereof, and upon its failure to do so on proper notice, the Society reserves the right to defend such action and to charge all costs to the Institution.~~

GENERAL CONDITION XV—REPRESENTATIONS

~~Standard of Care. The Institution represents that it is knowledgeable and experienced in research services and possesses the necessary expertise, facilities, and legal right to provide the Services contemplated hereunder. The Institution represents to the Society that the Services shall be performed in a workmanlike manner consistent with the standards of care, diligence, and skill ordinarily exercised by similar professional research institutions.~~

~~Laws and Regulations. The Institution represents and certifies that in the performance of the Services it is familiar with, understands and will comply with all applicable statutes, rules, regulations, orders, judgments, directives or other governmental requirements of the United States and of any state or political subdivision or of any foreign nation, jurisdiction, or subdivision where the Services will be conducted, including, without limit, licensing and certification requirements, laws and regulations designed to protect human and animal test subjects, environmental laws, health and safety laws, worker health and safety laws pertaining to labor wages, hours and other conditions of employment. The Institution shall obtain and/or will obtain all permits, licenses, or other forms of documentation required to provide the Services for the Society in compliance with said laws. The Institution shall furnish the Society with certification of compliance with applicable permits and licenses prior to performing the Services. Where appropriate, the Institute shall certify that it complies with all the Department of Health and Human Services (National Institute of Health [NIH]) guidelines regarding use of human and animal subjects in research and that an approved animal or human subjects Board has assured compliance for the Services.~~

GENERAL CONDITION XVI—WARRANTY

~~The Institution warrants that all Services performed under this Agreement shall conform to the specifications described in the proposal referenced in Article I, Statement of Work, and the Society shall provide the Institution notice of any non-conformance as soon as practicable after discovery of such non-conformance. Institution shall promptly correct, at no additional charge to Society, any such non-conformance caused in material part by the Institution's acts or omissions.~~

GENERAL CONDITION XVII—MISCELLANEOUS

~~a. Notices. All notices or other communications required to be given hereunder must be in writing and delivered either personally, by facsimile with electronic confirmation, by overnight courier or by U.S. mail, certified, return receipt requested, postage prepaid, and addressed as provided in this Agreement or as otherwise requested in writing by the receiving party. Notices delivered personally will be effective upon delivery and notices delivered by facsimile, overnight courier or U.S. mail will be effective upon their receipt by the party to whom they are addressed.~~

~~—— If to Society:~~

~~ASHRAE, Inc.  
1791 Tullie Circle, NE  
Atlanta, GA 30329  
Attn: Michael Vaughn~~

~~—— If to Institution:~~

~~—— XXXXX  
—— XXXXX~~

~~b. Governing Law. This Agreement will be governed by and construed and enforced in accordance with the laws of the State of Georgia, without regard to any conflicts of laws principles applied in that state.~~

~~c. Severability. In the event any provision of this Agreement or any part thereof is declared invalid or unenforceable by a final judgment or decree of a court of competent jurisdiction from whose decision no appeal is taken, or a decree of a competent governmental agency, all other sections, provisions and parts of this Agreement, and the application of such provision in any other circumstances, shall remain in full force and effect.~~

~~AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS  
INC.~~

Name:  
\_\_\_\_\_

Date:  
\_\_\_\_\_ Jeff H. Littleton

Title: ~~Executive Vice President~~

INSTITUTION

Name:

Date:

Title:

**REPORT TO BOARD OF DIRECTORS**  
**From Advocacy Committee**  
**Meeting of Sunday, June 26, 2011**

**Recommendations for Board approval:**

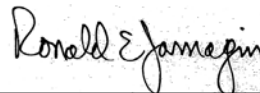
1. No current recommendations for the Board of Directors.

**Information Items**

1. ASHRAE is leading a broad coalition effort of building industry stakeholders to encourage the federal government to allow work to resume on the 2011 edition of the Commercial Buildings Energy Consumption Survey (CBECS). CBECS data is used by the U.S. Environmental Protection Agency's Energy Star program, and ASHRAE's Building Energy Quotient labeling program, among others.
2. ASHRAE continues to lead the High-Performance Building Congressional Caucus Coalition, which includes over 100 building industry stakeholders, and is designed to educate Members of Congress and their staff, and other federal decision-makers on the importance of building industry issues. ASHRAE now also chairs the National Institute of Building Sciences' Consultative Council, the Sustainable Buildings Industry Council, and is the convener of the High-Performance Building and Energy Efficiency Roundtable.
3. ASHRAE led an effort to identify May 23-29 as High-Performance Building Week. ASHRAE organized several events in Washington, DC to educate Members of Congress and their staff on technical issues and why building industry issues are important. ASHRAE also worked with the International Code Council (ICC) to connect High-Performance Building Week to ICC's Building Safety Month, which resulted in several State Governors issuing proclamations that contained statements of support for High-Performance Building Week.
4. ASHRAE Washington Staff continues to engage with the House of Representatives, Senate, and the Department of Energy on buildings related provisions in energy efficiency legislation, including the establishment of targets for Standard 90.1, and the development and implementation of a building energy labeling program.
5. ASHRAE Washington Staff has engaged the House of Representatives, Senate, and Army on prescribing Standard 189.1 for the design, construction, and renovation of Department of Defense facilities. ASHRAE works with ICC and the International Green Construction Code on these issues.
6. After helping write and enact into law the Federal Buildings Personnel Training Act, ASHRAE is working with the U.S. General Services Administration to provide training and certification programs to help implement and fulfill the requirements of this law.
7. ASHRAE is working with several states on building energy code issues. A highlighted example is Ohio, in which ASHRAE facilitated the adoption of Standard 90.1-2007 from 90.1-2004 in the Ohio Building Code.

June 26, 2011

Date



Ronald E. Jarnagin, Chair

**REPORT TO BOARD OF DIRECTORS**  
**From Society Rules Committee**  
**Meeting of Tuesday, June 28, 2011**

**Information Items:**

1. The format of the bEQ Committee will be aligned with committee structure in current ROB's.
2. A log of changes SRC has made to the Rules of the Board during 2010-2011 is in Attachment A.
3. SRC has received the following requests and referrals during the present Society meeting and will address in upcoming SRC meetings:
  - a. Draft Bylaw changes for Board vote at fall 2011 meeting to allow the Board of Directors to determine the fees to be charged for conferences for all members including Life Members and Presidential Members.
  - b. Review rules establishing the Building Energy Quotient Committee and report the results (propose any substantive changes, approve editorial changes) to the Board.
  - c. Review ROB 2.106.001.1 and ROB 3.800 regarding which body in ASHRAE approves applications from other organizations to become Associate Societies and propose an ROB change to resolve the conflict. (Referral from ExCom and recommendation that ExCom be authorized to approve Associate Society applications.)
4. SRC reviewed the Members Council proposed changes to ROB 3.100 Conferences and sent its response back to Members Council.

June 28, 2011

Date

*Thomas E. Werkema*

Thomas E. Werkema, Chair

**MASTER**  
**Log of Changes to Rules of the Board**  
**As Authorized by Society Rules Committee**  
**2010-2011**

2.424.003.6 When editorial or minor changes are needed to the Rules of the Board, this committee [Society Rules Committee] is empowered to make such changes provided they are reported to the Board of Directors at or before its next scheduled meeting. This committee may designate changes as minor only by unanimous consent. (08-01-20-14)

Based on the above authorizations, SRC has made the following changes to the Rules of the Board in Society year 2010-11:

Rule Volume	Rule Number	Outline of Change	Reason for Change	Date Change Authorized
3	3.200	Updated dues increases as stated in BOD motion 10-01-21-02 and removed references to dues amounts effective July 1, 2010	To remove effective dues dates that have passed.	2010-07-01
2	2.417.002.2	Deleted incorrect reference to Bylaws 7.2 as the source for stating that PEAC is chaired by the President-Elect	To correct reference in ROB	2010-07-23
2	2.402.003.2	Changed ROB reference from "Bylaws" to "Certificate of Consolidation" in the reference " Bylaws 7 (1) (j)"; corrected sequential numbering in 2.402.003	To correct source reference and numbering	2010-07-23
3	3.300.001	Corrected bylaws reference from 5.2 to 4.2 and changed wording to be consistent with bylaws.	To correct reference to and quote of bylaw	2010-07-23
3	3.300.001 B2	Deleted paragraph B2 based on revised bylaw 4.2, which consolidated requirements for officers and directors into one bylaw.	To correct reference to and quote of bylaw	2010-07-23
2	2.430.002.1	Deleted "Up to" in the rules on composition of YEA membership: "Up to 1 voting member from each region...."	To correct the grammar	2010-09-17
3	3.400, section 4.4.6	Changed "chairman" to "chair" in "...as requested by the chairman of the Members Council...."	For consistency in use of the term "chair"	2010-09-17
2	2.408.003.1	Changed ROB as marked: "The annual budget recommended by the Finance Committee shall target a General Reserve Fund <u>fiscal year ending</u> balance that is 2/3rds of <u>the</u> typical annual General Fund total expense. When warranted by economic conditions or society priorities,	To clarify wording	2010-09-17

Rule Volume	Rule Number	Outline of Change	Reason for Change	Date Change Authorized												
		the Finance Committee may recommend a lower General Reserve Fund <u>fiscal year ending balance</u> target level, but not lower than 1/3 <sup>rd</sup> of typical annual General Fund total expenses. For the purpose of determining reserve levels, typical annual General Fund expense is the rolling average of the three most recent years of General Fund expense. (91-01-20-13/03-01-29-11)”														
3	3.200	<p>Changed ROB 3.200, Dues, Fees, Privileges: Society dues shall be:</p> <table> <tr> <td>Member</td> <td><del>\$165.00</del> 180.00*</td> </tr> <tr> <td>Associate Member</td> <td><del>\$165.00</del> 180.00*</td> </tr> <tr> <td>Fellow</td> <td><del>\$165.00</del> 180.00*</td> </tr> <tr> <td>Student Member</td> <td><del>\$16.00 (will increase to \$20.00 July 1, 2010)</del> 20.00</td> </tr> <tr> <td>Retiree Member</td> <td>\$20.00</td> </tr> <tr> <td>Affiliate Member</td> <td>\$50.00 (Year 1), \$70.00 (Year 2), \$90.00 (Year 3)* *</td> </tr> </table> <p>* \$90.00 per year for Member and Associate Member grades for individuals who reside in countries listed in low-income and lower-middle-income groups of the World Bank List of Economies.</p> <p>* * <del>The dues structure for Affiliate Member grade of membership is \$50.00 for the first year of Affiliate Member membership, \$70.00 for the second year of Affiliate Member membership and \$90.00 for the third year of Affiliate Member membership, after which the</del> After three years of Affiliate Member membership, the Affiliate Member will become an Associate Member and will pay Associate Member dues.</p> <p>Note: Dues for Member, Associate Member, and Fellow grades of membership will increase as follows:  Effective July 1, 2010 – Increase to \$180.00  Effective July 1, 2011 – Increase to \$185.00  Effective July 1, 2012 – Increase to \$190.00</p>	Member	<del>\$165.00</del> 180.00*	Associate Member	<del>\$165.00</del> 180.00*	Fellow	<del>\$165.00</del> 180.00*	Student Member	<del>\$16.00 (will increase to \$20.00 July 1, 2010)</del> 20.00	Retiree Member	\$20.00	Affiliate Member	\$50.00 (Year 1), \$70.00 (Year 2), \$90.00 (Year 3)* *	To update	2010-09-17
Member	<del>\$165.00</del> 180.00*															
Associate Member	<del>\$165.00</del> 180.00*															
Fellow	<del>\$165.00</del> 180.00*															
Student Member	<del>\$16.00 (will increase to \$20.00 July 1, 2010)</del> 20.00															
Retiree Member	\$20.00															
Affiliate Member	\$50.00 (Year 1), \$70.00 (Year 2), \$90.00 (Year 3)* *															
2	2.411.004.1	<p>Changed the wording in criteria for “Pioneers of the Industry” award, section 15.7.1d, to read as follows:</p> <p>(d) The personality and popularity of the candidate and evidence of awards earned shall be considered only in the context of evaluating the contribution <del>which that</del> shaped the industry.</p>	To correct the grammar	2010-09-17												
2	2.411.003.4	Pioneers of the Industry Award (new award) was added to ROB	For consistency with other	2010-10-02												

Rule Volume	Rule Number	Outline of Change	Reason for Change	Date Change Authorized
		although BOD motion stated that the award was to be placed in H&A MOP. Information item on this decision was submitted to BOD October 18, 2010.	honors and awards requiring a vote by BOD	
1	1.201.014	Deleted 1.201.014.2, which was a duplicate of 1.201.014.1, ""The advertising policy shall include, as a minimum, responsibility and procedures for advertising sales, specifications, and production scheduling for ASHRAE publications containing advertisements.""	To eliminate duplicate rule.	2010-11-20
1	1.201.014.1	Deleted "(Also in Publishing and Education Council ROB)" from 1.201.014.1	The rule is located only in 1.201.014 and is not duplicated in the PEC rules.	2010-11-20
1	1.201.014.2 and 1.201.014.3	Capitalized the titles "Publisher" and "Director of Communications and Publications"	Titles should be capitalized.	2010-11-20
2	2.106.002.5	Three Associate Societies that had been approved by ExCom in 2009 and 2010 but were not added to the ROB have now been added. (ATEAAR, ASBRAV, Order of Engineers-Tripoli Lebanon)	To correct an oversight	2010-12-13
1	1.201.027	<p>ROB 1.201.027.4 Conditions</p> <p>A. Airplane Transportation</p> <p>5. A traveler who can reduce the transportation expense by <del>taking using</del> an alternate airport <del>or alternate means of transportation of other means of transportation (25 miles further away than the nearest airport to the traveler's office, home or destination)</del> may request ground transportation reimbursement. The total <del>transportation</del> costs (airfare, train, etc. and ground transportation) shall not exceed the costs <del>of transportation</del> from/to the nearest airport. <u>The alternative departure point must be 25 miles further away than the nearest departure point.</u></p> <p>6. If the most economical fare is of the type where a cost is involved for changes in flight plans, ASHRAE will reimburse the member for such costs where the change in flight plans results from unforeseen changes in the scheduled meeting or event.</p> <p>B. Private Vehicle Transportation</p>	To clarify the meaning of this ROB.	2011-02-01

Rule Volume	Rule Number	Outline of Change	Reason for Change	Date Change Authorized
		In the case of transportation by private vehicle, ASHRAE may reimburse the member, when requested, for the vehicle operating expenses at the current United States of America Internal Revenue Service reimbursement rate. <a href="#"><u>ASHRAE will not ordinarily reimburse travelers for mileage to/from the nearest airport or train.</u></a>		
2	2.425.003.5C	At the June 30, 2010, Board meeting, a motion was approved (10-06-30-21) to remove Technology Council from the process of recommending publication of standards. This change also meant that 2.425.003.5C should be changed, but this rule was not submitted for change. SRC approved this change as editorial.	To make ROB 2.425.003.5C consistent with Board action taken on 10-06-30.	2011-06-20
2	2.415.003.3	The Nominating Committee requested that language in the rule be clarified as follows:  B. The Regional Nominating Committee Member shall chair the CRC Executive Session. The CRC Executive Session is open only to the Regional Nominating Committee Member, Alternate, Reserve Alternate, and chapter delegates and alternates of that particular region and is not open to any other members of the Society Nominating Committee. Any current Society Board member shall not attend a regional caucus or executive session held in any region. (85-01-31-33/97-01-26-01/98-01-18-16/01-01-28-01/03-01-30-40B/006-06-28-09)  <u>2.415.003.3 Transportation Expenses</u>  Transportation expenses will be reimbursed, upon request, to the <b>Rregional Nominating</b> Committee Members and Alternates traveling to the Chapters' Regional Committee meeting in accordance with the current approved travel reimbursement policy. (94-01-23-01)	To clarify that reimbursement of transportation expenses applies to Regional Nominating Committee Members and Alternates.	2011-06-28
1	1.201.027	SRC voted to make the following editorial changes to the Travel Reimbursement Policy, ROB sections 1.201.027.4 and 1.201.027.5, Travel Policy:  IV. Conditions <del>A. Airplane Transportation</del>	To remove redundancies and clarify language. Numbering will be corrected.	2011-06-28

Rule Volume	Rule Number	Outline of Change	Reason for Change	Date Change Authorized
		<p>1. ASHRAE policy on use of <del>air</del>-transportation is to reimburse the member <u>for actual expenses</u>, when requested, an amount which does not exceed either the fourteen (14) day advance purchase (non-refundable) coach fare between the destination points or any Transportation Expense Cap that applies. Exceptions must be approved in advance by the ASHRAE treasurer.</p> <p>2. <u>The R</u> reimbursable costs <del>are limit is</del> for the basic airfare only. Cost of travel insurance, ground transportation, baggage handling, gratuities and other similar out-of-pocket expenses are not <del>reimbursable</del><u>included</u>.</p> <p><u>3 The traveler may request reimbursement for any combination of air, ground or other actual transportation expenses whose total does not exceed the cost limit.</u></p> <p><del>3. As most ASHRAE transportation is to attend meetings, which time and place are usually known well in advance, the member must make reservations early to take advantage of special fares.</del></p> <p>4. <del>In most cases airfares can be substantially reduced if the traveler stays over at the destination point.</del> When the member stays over <u>night at a destination</u> solely to use <del>the a</del> reduced fare, <del>ASHRAE will reimburse the member, when requested, for the airfare paid, plus the amount paid for one night's lodging and food to enable use of the lower fare, providing the total cost does not exceed the fourteen (14) day advance purchase (non-refundable) coach fare between the destination points.</del> <u>the traveler may request reimbursement for additional lodging expenses up to the allowed limit.</u> In those cases where more than one night's stay over would give a reduced airfare, approval may be authorized by the Coordinating Officer.</p> <p><del>5. A traveler who can reduce the transportation expense by taking an alternate airport or other means of transportation (25 miles further away than the nearest airport to the</del></p>		

Rule Volume	Rule Number	Outline of Change	Reason for Change	Date Change Authorized
		<p><del>traveler's office, home or destination) may request ground transportation reimbursement. The total costs (airfare, train, etc. and ground transportation) shall not exceed the cost of transportation from/to the nearest airport.</del></p> <p>6. If the most economical fare is of the type where a cost is involved for changes in flight plans, ASHRAE will reimburse the member for such costs where the change in flight plans results from unforeseen changes in the scheduled meeting or event.</p> <p><del>B. Private Vehicle Transportation</del></p> <p><del>1. _____ 1. _____ In the case of transportation by private vehicle, ASHRAE may reimburse the member, when requested, for the vehicle operating expenses <u>are determined from</u> at the current United States of America Internal Revenue Service reimbursement rate.</del></p> <p><del>2. The maximum amount that the member will be reimbursed will be equal to either the most economical fourteen (14) day advanced airfare (as defined in IVA.) or any Transportation Expense Cap that applies.</del></p> <p><del>C. Other Modes of Transportation</del></p> <p><del>1. In the case of travel by bus, train, boat, or any other means, ASHRAE may reimburse the member, when requested, for their transportation costs.</del></p> <p><del>2. The maximum amount that the member will be reimbursed will be equal to the lesser of either the actual transportation cost and the fourteen (14) day advanced airfare (as defined in IVA.) or any Transportation Expense Cap that applies. (01-01-31-13B/02-06-23-05)</del></p> <p><del>D. Exception</del></p> <p>1. The President or his representatives and their spouses may be reimbursed for business class airfare on scheduled</p>		

Rule Volume	Rule Number	Outline of Change	Reason for Change	Date Change Authorized
		<p>flights of more than seven hours when the member traveling has to work the next day.</p> <p><del>E. Documentation</del></p> <ol style="list-style-type: none"> <li>1. Travel expense reimbursement claims must be made on the approved ASHRAE form and must bear the signature of the Society officer or chairman authorizing the travel, if applicable.</li> <li>2. All claims should be submitted to ASHRAE's comptroller within 30 days of the travel date. Claims submitted after 90 days will not be reimbursed.</li> <li>3. Original receipts, or tickets, must be included with any travel reimbursement claim and must clearly show the amount claimed. With the advent of ticketless travel, a receipt from the travel agency or airline or a credit card statement will be acceptable.</li> <li>4. <del>Reimbursement will be provided for only the amount shown on an original transportation ticket or as indicated in IV.A.4.</del> Reimbursement WILL NOT be made when a member chooses to use personal Frequent Flyer Miles for transportation.</li> <li>5. All claims shall be paid in USA or Canadian currency. The exchange rate will be determined at the time the claim is processed by ASHRAE.</li> </ol> <p><del>F. Enforcement</del></p> <p><del>Members who do not comply with the fourteen (14) day advanced airfare purchase as stated in Section IV, paragraph A1, will only be reimbursed either the cost of a fourteen (14) day advanced purchase coach fare ticket as defined in Section II, paragraph C, or the maximum cost as defined in any applicable Transportation Expense Cap (Section II, paragraph E) and as confirmed by the ASHRAE Comptroller. If the member cannot comply with this policy or has any special</del></p>		

Rule Volume	Rule Number	Outline of Change	Reason for Change	Date Change Authorized
		<p><del>circumstances, a letter of explanation may be submitted with the travel verification requirements as defined in Section IV, paragraph E3.</del></p> <p><del>V. Member Responsibility</del></p> <p>A. <del>Prior</del> <u>It is the member's responsibility to identify costs that are reimbursable prior</u> to making arrangements to travel on behalf of ASHRAE, <del>it is the member's responsibility to identify what costs are reimbursable.</del></p>		