



TECHNOLOGY COUNCIL MEETING
Winter Conference, Orlando, FL
Wednesday, January 27, 2016

NOTE: These are not the official minutes until approved by Technology Council

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**PRINCIPAL MOTIONS
TECHNOLOGY COUNCIL MEETING**

Winter Conference, Orlando, FL
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Motion #	Description
1	Technology Council approved the minutes of the October 19, 2015 TechC Weekend meeting as distributed.
2	Technology Council approved consent motions 1-44 as they have no unresolved commenters and no negative votes for publication approval from the project committee or Standards Committee.
3	Technology Council to refer the following innovative item request on dual units to Pub Ed for consideration: “ASHRAE Journal should include dual units for all articles to assure accessibility to international members”.
4	Technology Council committed a maximum of \$80K (100% of the \$80 estimated budget) for the FY 2016-17 budget for the development of a Standard 90.1-2016 User’s Manual.
5	Technology Council recommended to BOD ExCom to authorize starting a revision of the <i>Environmental Tobacco Smoke (ETS)</i> Position Document (PD).
6	Technology Council reaffirmed the <i>Limiting Indoor Mold Growth and Dampness in Buildings Systems</i> PD.
7	Technology Council recommended to the Board of Directors that a Presidential Ad Hoc Committee be established in order to increase ASHRAE’s presence and influence in refrigeration.
8	Technology Council approved research project 1649-TRP, IAQ and Energy Implications of High Efficiency Filters in Residential Buildings, be awarded to the University of Toronto for a period of 24 months at a total cost to ASHRAE of \$180,215.
9	Technology Council approved research project 1666-TRP, Experimental Evaluation of the Thermal and Ventilation Performance of Stratified Air Distribution Systems Coupled with Passive Chilled Beams, be awarded to Purdue University for a period of 24 months at a total cost to ASHRAE of \$156,236.
10	Technology Council approved research project 1675-TRP, Guidance for CFD Modeling of Data Centers, be awarded to Florida International University for a period of 24 months at a total cost to ASHRAE of \$136,792.
11	Technology Council approved research project 1755-TRP, Impact of Gaseous Contamination and High Humidity on the Reliable Operation of Information Technology Equipment in Data Centers, be awarded to the Syracuse University for a period of 24 months at a total cost to ASHRAE of \$247,792.
12	Technology Council approved research project 1771-TRP, Energy Modeling of Typical Commercial Buildings in Support of ASHRAE Building Energy Quotient Energy Rating Program, be awarded to the University of Miami for a period of 24 months at a total cost to ASHRAE of \$199,395.

13	Technology Council approved \$5000 for the Residential Building Committee (RBC) budget to fund travel expenses for highly qualified speakers for ASHRAE Society meeting technical programs with hardship situations who do not traditionally attend ASHRAE meetings.
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ACTION ITEMS
TECHNOLOGY COUNCIL MEETING
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AI#	Responsibility	Status	Summary
1	Vallort		Request an ad-hoc or appropriate group be formed to develop policies required for managing data to support standards including machine-readable data, definitions, or other information and other ASHRAE products. It is recommended that the chair be Chip Barnaby. More members have expressed an interest to be a part of the committee.
2	Vallort		From the Innovative Ideas list; discuss with Chuck Gullledge the process of ASHRAE Journal articles including dual units for all articles to assure accessibility to international members.
3	Vallort		Jim Vallort to compose a letter to YEA regarding integration of a YEA member into Tech Council.
4	Vallort/Conover		Assign a subcommittee to write a method to control or disclaim document content posted on TC and PC Websites to ensure adherence to ASHRAE policies and positions.

MINUTES
TECHNOLOGY COUNCIL MEETING

Winter Conference, Orlando, FL

Wednesday, January 27, 2016

Voting Members Present

Jim Vallort, Chair
Pat Graef, Vice Chair
Dave Conover
Charlie Culp
Eckhard Groll
John Harrod
Jaap Hogeling
Dan Int-Hout
Ben Leppard
Charles Wilkin

Non-Voting Members Present

Wane Baker
Art Giesler
Rita Harrold
Carl Huber
Tom Lawrence
Cesar Lim
Doug Reindl
Matt Ritter
Max Sherman
Zuraimi Sultan

Absent

Roberto Aguilo, NVM
Karim Amrane, NVM
Babatunde Badru, NVM
Mike Bilderbeck, NVM
Mike Burgess, VM
Chris Mathis, NVM
Ashish Rakheja, NVM

Guests

Mick Schwedler
Annie Foster
Mark Ames, Sr. Mgr. of Federal Government Affairs
Steve Hammerling, AMORTS
Susan LeBlanc, Standards Admin
Tanisha Meyers-Lisle, Procedures Admin.
Lilas Pratt, MOSP
Stephanie Reiniche, MOS
Jim Scarborough, Manager - Grassroots Government Affairs
Mike Vaughn, MORTS

ASHRAE Staff

DD Latham, Admin. Asst.
Claire Ramspeck, DOT

1. CALL TO ORDER

Chair Jim Vallort called the meeting to order at 9:05 a.m. and asked Vice Chair, Pat Graef, to track the Action Items during the meeting. Mr. Vallort asked for any changes to the agenda. There being none, the agenda was accepted as presented.

Secretary's Note: Quorum was met with 9 voting members, plus the chair.

2. APPROVAL OF MINUTES

It was moved by Dave Conover and seconded by John Harrod that the:

M1 Minutes of the October 19, 2015 TechC Weekend meeting be approved as distributed.

MOTION 1 PASSED. Vote: 9-0-0, CNV

3. GRASSROOTS GOVERNMENT ADVOCACY COMMITTEE (GGAC) UPDATE

Mark Ames and Jim Scarborough from the ASHRAE DC office presented a report on the current activities of GGAC.

4. STANDING COMMITTEE REPORTS

A. Technical Activities (04B)

Chair Tom Lawrence gave an update to the council on TAC activities.

B. Standards (04A)

It was moved by Eckhard Groll and seconded by Dave Conover that:

M2 Technology Council approved the following consent motions 1-44 as they have no unresolved commenters and no negative votes for publication approval from the project committee or Standards Committee

1. Standards Committee recommends that BSR/ASHRAE Addendum *u* (*adds zeotropic refrigerant blend R-407G*) to ANSI/ASHRAE Standard 34-2013, *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 of addenda regarding the addition of new refrigerants in order to reach the market sooner.

2. Standards Committee recommends that BSR/ASHRAE Addendum *v* (*adds zeotropic refrigerant blend R-455A*) to ANSI/ASHRAE Standard 34-2013, *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 of addenda regarding the addition of new refrigerants in order to reach the market sooner.

3. Standards Committee recommends that BSR/ASHRAE Addendum *x* (*revises R-744 data*) to ANSI/ASHRAE Standard 34-2013, *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 of addenda regarding the addition of new refrigerants in order to reach the market sooner.

4. Standards Committee recommends that BSR/ASHRAE Addendum *f* (*updates the normative references*) to ANSI/ASHRAE Standard 62.1-2013 *Ventilation for Acceptable Indoor Air Quality*, be approved for publication.

5. Standards Committee recommends that BSR/ASHRAE Addendum *g* (*deletes an exception for cleaning coils that are difficult to clean*) to ANSI/ASHRAE Standard 62.1-2013 *Ventilation for Acceptable Indoor Air Quality*, be approved for publication.

6. Standards Committee recommends that BSR/ASHRAE Addendum *o* (*replaces references to whole-building or whole-house with dwelling unit*) to ANSI/ASHRAE Standard 62.2-2013, *Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings*, be approved for publication.
7. Standards Committee recommends that BSR/ASHRAE Addendum *p* (*clarifies the requirement that fans have at least on speed setting where the zone rating is 3 or less*) to ANSI/ASHRAE Standard 62.2-2013, *Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings*, be approved for publication.
8. Standards Committee recommends that BSR/ASHRAE Addendum *r* (*provides guidance on where ventilation system airflow measurements can be taken*) to ANSI/ASHRAE Standard 62.2-2013, *Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings*, be approved for publication.
9. Standards Committee recommends that BSR/ASHRAE Addendum *w* (*updates the normative references*) to ANSI/ASHRAE Standard 62.2-2013, *Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings*, be approved for publication.
10. Standards Committee recommends that BSR/ASHRAE/IES Addendum *f* (*daylight responsive controls for toplighting*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
11. Standards Committee recommends that BSR/ASHRAE/IES Addendum *v* (*building orientation*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
12. Standards Committee recommends that BSR/ASHRAE/IES Addendum *w* (*Envelope climate zone update and 169-2013 reference*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
13. Standards Committee recommends that BSR/ASHRAE/IES Addendum *af* (*water heater table correction*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
14. Standards Committee recommends that BSR/ASHRAE/IES Addendum *ah* (*emergency lighting controls*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
15. Standards Committee recommends that BSR/ASHRAE/IES Addendum *aj* (*return relief fans*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
16. Standards Committee recommends that BSR/ASHRAE/IES Addendum *am* (*parking garage daylighting*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
17. Standards Committee recommends that BSR/ASHRAE/IES Addendum *an* (*lighting restroom/stairwell local control*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
18. Standards Committee recommends that BSR/ASHRAE/IES Addendum *ap* (*fan Power – VAV control*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.

19. Standards Committee recommends that BSR/ASHRAE/IES Addendum *ar* (*energy Recovery terminology*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
20. Standards Committee recommends that BSR/ASHRAE/IES Addendum *as* (*parking lot occupancy controls*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
21. Standards Committee recommends that BSR/ASHRAE/IES Addendum *at* (*daylight calibration*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
22. Standards Committee recommends that BSR/ASHRAE/IES Addendum *au* (*Appendix G Water pumps*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
23. Standards Committee recommends that BSR/ASHRAE/IES Addendum *av* (*mechanical "configured to" terminology*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
24. Standards Committee recommends that BSR/ASHRAE/IES Addendum *aw* (*exhaust air energy recovery exemptions*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
25. Standards Committee recommends that BSR/ASHRAE/IES Addendum *az* (*Appendix G fenestration and skylights*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
26. Standards Committee recommends that BSR/ASHRAE/IES Addendum *bb* (*included fan energy*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
27. Standards Committee recommends that BSR/ASHRAE/IES Addendum *bc* (*opaque doors*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
28. Standards Committee recommends that BSR/ASHRAE/IES Addendum *bl* (*water economizer requirements*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
29. Standards Committee recommends that BSR/ASHRAE/IES Addendum *bp* (*Appendix G economizer high limit shutoff*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
30. Standards Committee recommends that BSR/ASHRAE/IES Addendum *bq* (*Appendix G fan powered systems*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
31. Standards Committee recommends that BSR/ASHRAE/IES Addendum *br* (*Mechanical Climate Zone 0 criteria*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.

32. Standards Committee recommends that BSR/ASHRAE/IES Addendum *bt* (*transformer efficiency requirements*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
33. Standards Committee recommends that BSR/ASHRAE/IES Addendum *bv* (*ECB purchased heating and cooling*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
34. Standards Committee recommends that BSR/ASHRAE/IES Addendum *bx* (*Appendix G Design airflow rates*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
35. Standards Committee recommends that BSR/ASHRAE/IES Addendum *by* (*domestic hot water branch insulation*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
36. Standards Committee recommends that BSR/ASHRAE/IES Addendum *cc* (*sidelight affective aperture*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
37. Standards Committee recommends that BSR/ASHRAE/IES Addendum *ci* (*fenestration orientation*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
38. Standards Committee recommends that BSR/ASHRAE/IES Addendum *cj* (*Appendix G System 11 footnote*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
39. Standards Committee recommends that BSR/ASHRAE/IES Addendum *ck* (*Appendix G heat rejection*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
40. Standards Committee recommends that BSR/ASHRAE/IES Addendum *du* (*water economizers*) to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, be approved for publication.
41. Standards Committee recommends that BSR/ASHRAE/USGBC/IES Addendum *a* (*clarifies the location of a CO2 sensor to determine the outdoor air concentration*) to ANSI/ASHRAE/USGBC/IES 189.1-2014, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.
42. Standards Committee recommends that BSR/ASHRAE/USGBC/IES Addendum *d* (*corrects and clarifies that Standard 90.1, Table 9.6.3, control factors can be used to help meet the lighting power density requirements of Standard 189.1*) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2014, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.
43. Standards Committee recommends that BSR/ASHRAE/USGBC/IES Addendum *e* (*creates new Section 7.4.6.1.1(d) to provide control credits for institutional tuning that are in addition to the control factors that already exist in Standard 90.1-2013, Section 9.6.3*) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2014, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.

44. Standards Committee recommends that BSR/ASHRAE/USGBC/IES Addendum g (*provides a higher level of indoor moisture control than is currently required by reference to Standard 62.1*) to ANSI/ASHRAE/USGBC/IES Standard 189.1-2014, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, be approved for publication.

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

Chair Doug Reindl reviewed the Standards Committee report information items with the Council, specifically highlighting the following item:

At the PC Chair's Breakfast, Chip Barnaby presented on a new product on the ASHRAE site that allows open access to ASHRAE Standards Definitions and Data that would allow for automation (XML schema, data format definitions) and for users (forms, templates). This is data.ashrae.org. There are samples for Guideline 12 and Standard 90.1 forms. Now that the test site is up, policies and procedures need to be developed for content approval and security. Standards Committee believes this effort should be led by a Tech Council Ad Hoc with input from the Electronic Communications Committee (ECC) and Pub Ed Council.

AI#1: Jim Vallort to request an ad hoc or appropriate group be formed to develop policies required for managing data to support standards including machine-readable data, definitions, or other information and other ASHRAE products. It is recommended that the chair be Chip Barnaby. More members have expressed an interest to be a part of the committee.

C. Environmental Health Committee (EHC) (04C)

Chair Zuraimi Sultan updated the Council on EHC activities.

D. Refrigeration Committee (04D)

Chair Matt Ritter updated the Council on REF activities.

E. Research Administration Committee (04E)

Chair Carl Huber updated the Council on RAC activities.

5. SUBCOMMITTEE REPORTS

A. Operations Subcommittee (05A)

It was moved by John Harrod and seconded by Pat Graef that the:

- M3** Technology Council refer the following innovative item request on dual units to Pub Ed Council for consideration: "*ASHRAE Journal should include dual units for all articles to assure accessibility to international members*".

Background: The current rules read that articles should use IP or SI or dual units.

MOTION 3 PASSED: Vote: 5-4¹-0, CNV

AI#2: Jim Vallort to discuss with Chuck Gullede the process of ASHRAE Journal articles including dual units for all articles to assure accessibility to international members.

¹ Eckhard Groll, John Harrod and Jaap Hogeling felt that SI should be the norm.

In Mike Burgess's absence, John Harrod (acting OPS chair) gave an update on the Innovative Items spreadsheet to the council.

AI#3: Jim Vallort to compose a letter to YEA regarding integration of a YEA member into Tech Council.

B. Special Projects Subcommittee (05B)

It was moved by Eckhard Groll that:

- M4** Technology Council commit a maximum of \$80K (100% of the \$80 estimated budget) for the FY 2016-17 budget for the development of a Standard 90.1-2016 User's Manual.

Background: Standard 90.1-2016 will publish in October of this year and the User's Manual needs to be updated to reflect the changes in the standard. The motion to initiate this special project was approved by Special Projects Subcommittee by voice vote, 4-0-1 CNV. (*Dave Conover abstained due to possible conflict of interest because one of the PMS members is a co-worker and because he is a PNNL employee and DOE funding may be solicited.*)

Fiscal Impact: Outside funding has become increasingly difficult to obtain, but co-funding will still be solicited to offset as much of the cost as possible.

MOTION 4 PASSED: Vote: 8-0-1², CNV

C. Document Review Subcommittee (DRSC) (05C)

It was moved by Pat Graef that:

- M5** Technology Council recommends to BOD ExCom that they authorize a revision of the *Environmental Tobacco Smoke (ETS) Position Document (PD)*.

BACKGROUND: The proposed title, purpose and scope (TPS) is included as **Attachment 05C-1**. The current PD (**Attachment 05C-2**) expires June 25, 2016. The revision would allow the PD to conform to the latest ASHRAE PD template, update references, and include some editorial changes. EHC has identified Larry Schoen as a possible chair of a PD committee with Costas Balaras, Lan Chi Weekes, Kevin Kennedy, and Andy Persily as possible PD committee members.

MOTION 5 PASSED: Vote: 9-0-0, CNV

It was moved by Pat Graef that:

- M6** Technology Council reaffirm the *Limiting Indoor Mold Growth and Dampness in Buildings Systems PD*.

BACKGROUND: The current PD (**Attachment 05C-3**) expires January 29, 2016. Co-cognizant committee (TC 1.12) voted unanimously to reaffirm the PD as well. This PD does conform to the current ASHRAE PD template. EHC anticipates a revision may be appropriate at the conclusion of the work of the MTG.BD-Building Dampness to develop a definition or description of a damp building.

MOTION 6 PASSED: Vote: 9-0-0 CNV

² Dave Conover abstained due to possible conflict of interest.

AI#4: Jim Vallort/Dave Conover assign a subcommittee to write a method to control or disclaim document content posted on TC and PC Websites to ensure adherence to ASHRAE policies and positions.

10 minute break 10:47-10:57

6. STANDING COMMITTEE REPORTS (cont.)

A. Technical Activities Committee (TAC)

It was moved by Ben Leppard and seconded by Eckhard Groll that:

- M7** Technology Council recommend to the Board of Directors that a Presidential Ad Hoc Committee be established in order to increase ASHRAE's presence and influence in refrigeration.

Background: There are problems getting enough people involved in the refrigeration area and getting the expertise to update Handbook and other documents. The motion passed unanimously in TAC. Some sister societies have had success addressing this issue. The ad hoc may wish to look to those societies for ideas and suggestions.

MOTION 7 PASSED: Vote: 9-0-0, CNV

7. EXECUTIVE SESSION

It was moved by Pat Graef and seconded by John Harrod that:

- M8** Research project 1649-TRP, IAQ and Energy Implications of High Efficiency Filters in Residential Buildings, be awarded to the University of Toronto for a period of 24 months at a total cost to ASHRAE of \$180,215.

MOTION PASSED.

It was moved by Pat Graef and seconded by John Harrod that:

- M9** Research project 1666-TRP, Experimental Evaluation of the Thermal and Ventilation Performance of Stratified Air Distribution Systems Coupled with Passive Chilled Beams, be awarded to Purdue University for a period of 24 months at a total cost to ASHRAE of \$156,236.

MOTION PASSED.

It was moved by Pat Graef and seconded by Ben Leppard that:

- M10** Research project 1675-TRP, Guidance for CFD Modeling of Data Centers, be awarded to Florida International University for a period of 24 months at a total cost to ASHRAE of \$136,792.

MOTION PASSED.

It was moved by Pat Graef and seconded by John Harrod that:

- M11** Research project 1755-TRP, Impact of Gaseous Contamination and High Humidity on the Reliable Operation of Information Technology Equipment in Data Centers, be awarded to the Syracuse University for a period of 24 months at a total cost to ASHRAE of \$247,792.

MOTION PASSED.

It was moved by Dave Conover and seconded by Pat Graef that:

- M12** Research project 1771-TRP, Energy Modeling of Typical Commercial Buildings in Support of ASHRAE Building Energy Quotient Energy Rating Program, be awarded to the University of Miami for a period of 24 months at a total cost to ASHRAE of \$199,395.

MOTION PASSED.

8. STANDING COMMITTEE REPORTS (cont.)

A. Residential (04E)

It was moved by Dave Conover and seconded by John Harrod that the:

- M13** Technology Council approve \$5000 for the Residential Building Committee (RBC) budget to fund travel expenses for highly qualified speakers for ASHRAE Society meeting technical programs with hardship situations who do not traditionally attend ASHRAE meetings.

Background: Candidates for this travel funding would be selected by the RBC. An example of an appropriate candidate would be California Energy Commission staff who are unable to get funding to travel out of state. This would be a standing budget item for five years and would likely cover about three speakers per year. The motion was approved by Residential Building Committee, 10-0-1 CNV

Fiscal Impact: \$5000.

MOTION 13 PASSED: Vote: 9-0-0, CNV

9. DIRECTOR'S REPORT (08)

Claire Ramspeck, Director of Technology, reviewed with the Council ongoing Technology department activities and shared a list of accomplishments to date.

10. CHAIR'S REPORT

Chair Jim Vallort reminded the standing committee chairs that their Members First Articles are due in by Friday, February 12, 2016 and the Tech Council Summer Conference meeting in St. Louis, MO, is scheduled for Wednesday, June 29, 2016 – 9:00 a.m. to 12:00 p.m.

The meeting adjourned at 11:40 a.m.

*Attachments to these minutes can be found on the FTP site under:
03 Tech Council Info/Minutes/2016_17/Orlando Meeting 1_27_2016*