



## MINUTES

### EXECUTIVE COMMITTEE MEETING

Orlando Hilton Hotel  
Orlando, Florida  
January 23, 27 & 28, 2016

**Note: These draft minutes have not been approved and are not the official, approved record until approved by the Executive Committee.**

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 January 23, 27 & 28, 2016

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**PRINCIPAL MOTIONS**  
Executive Committee Meeting  
January 23, 27 & 28, 2016

- | <b>No. - Pg.</b> | <b>Motion</b>   |
|------------------|---|
| 1 – 8            | that the Board of Directors approve the following changes to the Rule of the Board proposed by the Foundation Trustees. ( <i>Secretary's Note: See complete motion and table in Attachment G</i> )<br><br>Modify Section 3.300.007.2.C ELECTION PROCEDURES FOR ASHRAE FOUNDATION TRUSTEES as follows:<br><br>C. The President-Elect shall recommend from the list of eligible candidates one candidate for each vacancy <u>and three candidates for the position of Alternate Trustee.</u> All candidates shall be ranked in priority order. Prior to recommendation by the President-Elect, Staff shall confirm the candidates' willingness to serve if elected.                                       |
| 2 – 9            | that the Foundation Trustees be semi-autonomous and that the groups work together to find some middle ground.   |
| 3 – 9            | that the Board of Directors approve the following revision to the Rule of the Board proposed by the Scholarship Trustees:<br><br>Revising the criteria for the ASHRAE Region IV Benny Bootle Memorial Scholarship in Appendix D of the Scholarship Guidelines as follows:<br><br>b. <u>The receipt of the Region IV Benny Bootle Memorial Scholarship must meet the general criteria for any ASHRAE scholarship as outlined in the ASHRAE Society Scholarship Program Guidelines.</u> <del>No candidate will be considered for the Region IV Benny Bootle Memorial Scholarship unless that person has been ranked high enough to also qualify for any of the other available ASHRAE scholarships.</del> |
| 4 – 11           | that the Board of Directors approve the American Institute of Architects (AIA)/ASHRAE Memorandum of Understanding.  |
| 5 – 12           | that the Board of Directors approve the Association of Facilities Engineering (AFE)/ASHRAE Memorandum of Understanding.   |
| 6 – 12           | that the Board of Directors approve the International District Energy Association (IDEA)/ASHRAE Memorandum of Understanding.  |
| 7 – 12           | that the Board of Directors approve the Association of Higher Education Facilities Officers (APPA)/ASHRAE Memorandum of Understanding.  |
| 8 – 13           | that ASHRAE endorses the concept and the areas of proposed cooperation and collaboration in the field of Energy Technologies, Urban Systems and Monetization of Efficiency and Resiliency and will work together towards a memorandum of understanding.   |
| 9 – 15           | that ExCom authorize starting a revision of the <i>Environmental Tobacco Smoke (ETS)</i> Position Document (PD).  |

**ACTION ITEMS**  
Executive Committee Meeting  
January 23, 27 & 28, 2016

<b>Item</b>	<b>Responsible</b>	<b>Summary of Action</b>	<b>Status</b>
1 - 2	Chakroun/Graef	(Carryover) Coordinate with UNEP on the position documents and public policy issue briefs from ASHRAE. (11/2015: Ongoing. <b>1/2016: Ongoing.</b> )	_____
2 – 2	Gulledge	(Carryover) Proceed with University Course Development through PEC. ( <b>1/2016: Working with Mr. Wentz on basic bEQ course.</b> )	_____
3 – 2	Chakroun	(Carryover) Contact UNEP regarding the approved position document <i>Ammonia as a Refrigerant</i> Position Document was approved. ( <b>1/2016: Ongoing.</b> )	_____
4 – 2	Olesen	Share information from the DKV Conference with the Refrigeration Committee.	_____
5 – 3	Chakroun/Littleton	Discuss potential UNEP/ASHRAE training contracts.	_____
6 – 5	Littleton	Schedule meeting space at the Annual Meeting in St. Louis for the incoming and outgoing President-Elect Advisory Committees to meet together.	_____
7 – 9	Wentz	Work with the Foundation Trustees on a semi-autonomous operation model and separate from the appointments process.	_____
8 – 9	Littleton	Notify the Student Activities RVCs and provide a list of scholarships to Student Activities Chairs to distribute.	_____
9 – 11	Graef	Report at the ExCom meeting in Banff the results of the Standards Ad Hoc Committee.	_____
10 – 11	Littleton	Contact the AIA regarding the approval of the ASHRAE/AIA Memorandum of Understanding.	_____
11 – 11	Littleton	Request that legal counsel take a look at the IEQ-GA by-laws.	_____
12 – 12	Olesen	Report to Mr. Vallort when IEQ-GA documents are ready to be reviewed by Tech Council.	_____
13 – 12	Littleton	Contact the AFE regarding the approval of the ASHRAE/AFE Memorandum of Understanding.	_____
14 – 12	Littleton	Contact the International District Energy Association regarding the approval of the ASHRAE/IDEA Memorandum of Understanding.	_____
15 – 12	Littleton	Contact the Association of Higher Education Facilities Officers (APPA) regarding the approval of the ASHRAE/APPA Memorandum of Understanding	_____
16 – 12	Littleton	Work with CAMEE to renew the CAMEE/ASHRAE Memorandum of Understanding which is expiring in the coming month and add item to Spring ExCom agenda.	_____

Item	Responsible	Summary of Action	Status
17 – 12	Wentz	Work with CIBSE to develop a joint position document on resiliency impact and environmental changes.	_____
18 – 13	ExCom	Send ideas to Mr. Wentz regarding ideas for handling fall council meetings.	_____
19 – 13	ExCom	Review the Lawrence Berkely National Laboratory Memorandum of Understanding and discuss it at Spring ExCom and take to the Board in St. Louis if approved.	_____
20 – 14	Graef	Take the data from the MOU Ad Hoc and start to sort the MOUs so that they can be tracked effectively.	_____
21 – 14	Littleton	Discuss with staff and suggest appropriate names to serve on IAQA Ad Hoc.	_____
22 – 15	Littleton	Authorize starting a revision of the <i>Environmental Tobacco Smoke (ETS)</i> Position Document (PD).	_____
23 – 15	Chakroun	Work with CEC to investigate the possibility of partnering with CAR to run a HPB Conference in China starting in 2018.	_____



## EXECUTIVE COMMITTEE MEETING

Orlando Hilton Hotel  
Orlando, Florida  
January 23, 27 & 28, 2016

MEMBERS PRESENT: T. David Underwood, President  
Timothy G. Wentz, President-Elect  
Bjarne W. Olesen, Treasurer  
Patricia T. Graef, Vice President  
Charles E. Gulledge III, Vice President  
Walid Chakroun, Vice President  
James K. Vallort, Vice President

STAFF PRESENT: Jeff H. Littleton, Executive Vice President  
Mary D. Townsend, Executive Assistant

January 23, 2016

Guests:

Chonghui Lin, Leadership U  
Jessica Errett, Leadership U  
Chris Washburn, Leadership U  
Manalee Nabar, Leadership U  
Blake Ellis, DRC Region IX

ASHRAE Staff:

Joyce Abrams  
Vanita Gupta  
Claire Ramspeck  
Lilas Pratt  
Kim Mitchell  
Craig Wright  
Steve Comstock

January 27, 2016

Jessica Errett, Leadership U  
Chonghui Lin, Leadership U  
Chris Washburn, Leadership U  
Manalee Nabar, Leadership U

Vanita Gupta  
Mark Ames  
Claire Ramspeck  
Jim Scarborough  
Joyce Abrams  
Kim Mitchell  
Patricia Adelman

January 28, 2016

Ted Zachwieja, Leadership U

Mark Ames  
Jim Scarborough

### Call to Order

President Underwood called the Executive Committee meeting to order on Saturday, January 23, 2016 at 8:30 a.m. ExCom members, staff, and guests attended as listed above.

**Review of the Agenda**

Items were added to the agenda during the three days of meetings and they have been included in the minutes.

- IEQ-GA Proposed By-laws
- Association of Facilities Engineers (AFE)/ASHRAE MOU
- International District Energy Association (IDEA)/ASHRAE MOU
- Association of Higher Education Facilities Officers (APPA)/ASHRAE MOU
- Technology Report to Executive Committee
- Members Night Out Feedback
- Standards User Manual Expedited
- High Performance Building Conference

**Approval of Minutes**

Ms. Graef moved:

that the minutes of the November 7 and 8, 2015 ExCom meeting be approved.

**MOTION PASSED** (Unanimous voice vote, CNV)

**Review of Action Items – November 7 and 8, 2015**

Action items 1-3 are ongoing and listed in the action item list at the beginning of the minutes. Updates are included where possible.

AI 1-3

**Report of the President** - Attachment A

President Underwood reported that his attached travel report reflects visits made year to date and are submitted for officer review.

**Reports of Officers' CRC and Intersociety Visits**

Mr. Wentz reported that he attended the Northeast Oklahoma Chapter in Tulsa, OK with Mr. Michael J. Teague, Oklahoma's Secretary of Energy and Environment. They shared a stage and had a valuable interchange. Mr. Wentz also was in Washington D.C. and had visits with Mr. Underwood at the Department of Energy and the White House.

Ms. Graef reported that she attended AHRI and was impressed with the interaction between ASHRAE and AHRI. She was able to attend the executive session and was able to be a voting member. She attended GreenBuild and was present at the awards luncheon where Kathryn Hammock was presented with an award.

Mr. Olesen attended the German Society of Refrigeration (DKV), along with about 600 participants. He was given time at the beginning of the session to discuss ASHRAE and its efforts with refrigeration. He reported that ASHRAE should participate in this three-day conference, as there are ASHRAE members that attend the event.

Mr. Olesen will share information from the DKV Conference with the Refrigeration Committee.

AI-4



Mr. Chakroun reported that he attended a UNEP conference in Paris. He was not attending as an ASHRAE representative. UNEP has expressed interest in ASHRAE training programs. There is a meeting on Sunday in Orlando to discuss and finalize plans for the upcoming fisheries conference. and finalize the plans.

Mr. Chakroun and Mr. Littleton will discuss potential UNEP/ASHRAE training contracts.

AI-5

Mr. Chakroun reported that there is a small window for ASHRAE to be have influence over the introduction of new flammable refrigerants, and that ASHRAE should take the lead. There is a need for Standards 15 and 34 to keep pace with industry demand for safety classification of new refrigerants.

Mr. Littleton reported that critical research from manufacturers is not being released and has an impact on the speed at which data on new refrigerants can be added to the standard.

### **Report of the Treasurer** Attachment B

#### 2015-16 Financial Update

Mr. Olesen reported that the General Fund forecast for 2015-2016 shows that the projected deficit has increased by roughly \$150K. The budget was presented in June 2015 with a deficit of \$449K; the current forecast has a deficit of \$592K. Increased salaries, benefits, and publishing promotion are the major expenses and they are not offset by the increases in revenues.

#### 2016-2017 Budget

The Finance Committee has been working on the 2016-2017 budget. At present, there is a projected deficit of \$143,000.

#### ASHRAE Investment Report

The consolidated cumulative net assets showed a decrease as of December 31, 2015. This is due to lower investment valuations. ASHRAE's investment advisor expects bond returns in the 2.5% – 4% range. They are cautiously optimistic. There has been some discussion by the Finance Committee about the possibility of using a portion of the research reserve fund to accelerate research into flammable 2L refrigerants.

#### Finance Committee Report

Mr. Olesen reported that the Finance Committee will present a motion to the board to revise its "Finance Dues Increase Policy," effective Fiscal Year 2017-18. [In addition, the corresponding portions of ROB 3.200.001 Society Dues and 3.200.007 Student Member Transfer will be revised.]

Mr. Olesen reported information items from the Finance Committee Report:

- A motion to have ASHRAE Research Canada (ARC) become a registered charity was defeated after detailed research with ASHRAE's CPA firm. ARC does not qualify as a registered charity.

- A referral motion from Region XII (Argentina Chapter) to Members Council was defeated. Region XII had requested that ASHRAE offset the “government tax” on purchases made out of the country, including ASHRAE dues.
- A Finance Committee MBO is to identify programs operating with a deficit
- The successful Orlando meeting will have a positive impact on budget projections; the 2015-16 budget forecast is conservative and projected to improve substantially.

Mr. Gulledge requested an update regarding the potential losses at the conference and expo as a result of the inclement weather.

Mr. Littleton reported there was some negative impact but a relatively small impact on the budget.

### **Reports of Bodies Reporting to ExCom**

#### North American Technician Excellence (NATE) Attachment C

Mr. Underwood reported that NATE certification is growing very fast and that the attached report from Mr. Kennedy provides more detail from the NATE Board meeting.

#### CLIMA Ad Hoc Committee Attachment D

Mr. Olesen reported that the CLIMA conference will be held in Denmark in May 2016. He added that an ASHRAE member was awarded an honorarium to be used by the student to present his Orlando paper during the CLIMA conference. Mr Olesen suggested that ASHRAE organize a World Student Competition during a year in which CLIMA is not held.

#### Advanced Energy Design Guide Steering Committee (AEDG) Attachment E

Mr. Graef reported the latest update from the AEDG:

##### Distribution Recap as of January 7, 2015

- 560,976 AEDGs downloaded as of January 7, 2016
- 26,140 titles distributed in print.
- 587,116 total copies in circulation as of January 7, 2016
- 146,265 registrants account for free AEDG downloads
- 59,825 copies of 50% AEDG-Small/Medium Office since May, 2011
- 27,312 copies of 50% AEDG-K12 since October, 2011
- 41,236 copies of 50% AEDG-Retail since January 2012
- 18,474 copies of 50% AEDG-Hospital since May 2012
- 3,964 copies of 50% AEDG-Grocery since March 2015

Other highlights included:

- Mr. Phoenix began as Chair of the Steering Committee in November 2015. Mr. Schwedler (chair emeritus) is assisting as requested.
- The AEDG Steering Committee partner organizations continue to work on the execution of the implementation and outreach plan (IOP) for the guides.
- Outreach efforts to date include:
  - Presentation on the 50% Grocery Guide at the Food Market Institute (FMI) Convention in September 2015. Roughly 250 people attended the session.
  - Acceptance of a 4-hour workshop on the architectural aspects of the AEDGs for the AIA annual convention in May 2016.

- o Development of a brochure on the AEDG series of guides that is distributed at all conventions attended by AIA representatives.
- o Preparation for a presentation on the 50% AEDG for Grocery Stores at the Better Buildings Initiative workshop in May 2016.

President-Elect Advisory Committee Attachment F

Mr. Wentz reported that PEAC has worked diligently over the first 6 months of the Society year and has developed a presidential theme currently entitled “Adapt Today to Shape Tomorrow.” The presidential theme has three directives and three initiatives for each directive. The original roadmap budget has been reduced to \$400,000 from the original projections announced in the fall.

Mr. Littleton will schedule meeting space at the Annual Meeting in St. Louis for the incoming and outgoing President-Elect Advisory Committees to meet together.

AI-6

Foundation Trustees Attachment G

Mr. Wentz moved

(1) that the Board of Directors approve the following changes to the Rule of the Board proposed by the Foundation Trustees. *(Secretary’s Note: See complete motion in Attachment G)*

Modify Section 3.300.007.2.C ELECTION PROCEDURES FOR ASHRAE FOUNDATION TRUSTEES as follows:

- C. The President-Elect shall recommend from the list of eligible candidates one candidate for each vacancy and three candidates for the position of Alternate Trustee. All candidates shall be ranked in priority order. Prior to recommendation by the President-Elect, staff shall confirm the candidates’ willingness to serve if elected

Modify Section 3.300.009 as follows:

**3.300.009 NOMINATION AND ELECTION TIMETABLE** (09-06-24-15)

Action	Responsible	Completion Date
<p>A database will be continuously updated that lists qualified members who have indicated a willingness to serve if elected for each council and BOD-elected committee. The database will also indicate whether the member has previously served. Members currently serving on standing committees and councils whose terms are not expiring are not eligible for consideration.</p> <p>The database shall also be continuously updated to list qualified members who have indicated willingness to serve (if elected) as Trustee of the ASHRAE Foundation and Scholarship Trustees. Members</p>	<p>Staff</p>	<p>Continuous process</p>

Action	Responsible	Completion Date
currently serving on the Board of Directors whose terms are not expiring are not eligible for consideration.		
1. From the President-elect's list of nominees for standing committees, the ASHRAE Foundation, and the ASHRAE Scholarship Program that were not selected for service, make additions to the member database.	President-Elect/Staff	3/31
2. Solicit member self-nomination for BOD-elected committee positions (Council positions not included) via e Society Newsletter, Insights and direct email to members. The solicitation shall include link to ashrae.org that lists qualifications for service on each committee. Add names to database.	Staff	4/30
3. Solicit nominations from BOD members, committee chairs and other interested parties for the various BOD-elected council and committee positions. Provide nominators with qualifications for membership on each council and committee.  Solicit nominations from BOD members, ASHRAE Foundation Trustees, Past Society Presidents, Golden Circle Award winners, Research Promotion Committee, staff at interest, and other source(s) as appropriate for service as Trustee on the ASHRAE Foundation. Provide nominators with qualifications for membership in the ASHRAE Foundation.  Solicit nominations from BOD members, ASHRAE Scholarship Program Trustees, Past Society Presidents, staff at interest, and other source(s) as appropriate for service as Trustee on the ASHRAE Scholarship Program. Provide nominators with qualifications for membership in the ASHRAE Scholarship Program.	Staff	5/30
4. Deliver updated database of qualified members for BOD-elected committees to BOD ExO members, council and committee chairs for review. <u><a href="#">Deliver updated list of nominations for position of ASHRAE Foundation Trustee to the Chair of the Foundation Board of Trustees.</a></u> Review is confidential so that potential candidates are not misled into thinking they have been selected for membership.	Staff	6/15
5. New Committee BOD ExO members, in consultation with past committee BOD ExO	Staff	7/15

Action	Responsible	Completion Date
members, shall return list of nominees selected from database of members who have previously agreed to serve if elected. List shall include at least twice the number of members and alternates required for election. This process excludes the Nominating Committee, for which there is not a BOD ExO member.		
6. Appoint Nominating Sub-Committees for Councils, Standards, Technical Activities, Research Administration, Handbook and Nominating Committees per ROB Book 2, Election and Appointment Procedure. BOD sub-committees shall be tailored to the group being nominated, with DAL's on sub-committees for technical bodies and DRC's on sub-committees for non-technical bodies. Provide BOD sub-committee for Nominating Committee with list of all qualified members who have indicated a willingness to serve.	President	8/1
7. BOD sub-committees confirm willingness to serve if elected of all prospective nominees, rank nominees in order of preference and return ranked list and recommendations for chair and vice-chair of BOD-elected committees to Staff Assistant to the Board of Directors.	BOD Sub-committees	9/30
8. <u>Obtain list of recommended candidates for the position of ASHRAE Foundation Trustee from the chair of the Foundation Board of Trustees. Deliver list of recommended candidates for Foundation Trustee and</u> updated database of qualified members for ASHRAE Foundation Trustees, and ASHRAE Scholarship Program Trustees to the President-Elect for review. Review is confidential so that potential candidates are not misled into thinking they have been selected for membership.	Staff	9/30
9. Review recommendations for chair and vice-chair of BOD-elected committees and revise if desired.	President-Elect	10/15
10. President-Elect shall confirm willingness to serve if elected nominees to the ASHRAE Foundation and the ASHRAE Scholarship Program, rank nominees in order of preference, and return ranked list and recommendations to Staff.	President-Elect, Staff	11/1

Action	Responsible	Completion Date
Staff shall advise the BOD of list of nominated Trustees, ranked, with biographies. Staff shall also provide to the BOD a list of qualified and eligible members who are not nominated by the President-Elect.		
11. BOD Sub-committee chairs present recommendations to Executive Committee.	BOD Sub-committee chairs	Fall ExCom Meeting
12. Advise BOD of list of proposed chairs, vice-chairs and ranked committee member nominees with biographies	Staff	11/15
13. Conduct BOD conference call to elect members and alternates of councils and committees.	BOD	Winter NLT 12/15
14. After report of Nominating Committee to BOD, make required substitutions to previously elected members and alternates to BOD-elected councils and committees.	Staff BOD	Winter Meeting
15. Advise elected chairs, vice-chairs, members and alternates of BOD-elected councils and committees of their election	Staff	2/15
<p>* <u>Note</u>: Current rules are as follows:</p> <p>Councils -- a minimum of 2 per vacancy  Standards -- a minimum of 2 per vacancy  RAC -- a minimum of 2 per vacancy  TAC -- a minimum of 2 per vacancy  Handbook – a minimum of 2 per vacancy  Nominating – a minimum of 36  Foundation Trustees - - a minimum of 21 per vacancy  Scholarship Trustees - - a minimum of 2 per vacancy</p>		

**MOTION 1 PASSED** (Unanimous, CNV)

Information items included:

- The Foundation pledged \$95,000 to support ALI in the 2015/2016 year. ASHRAE Learning Institute Fund 259 has experienced losses and does not have sufficient funds to satisfy that pledge.
- The Foundation Executive Committee will work with ALI to determine their future needs

for support. Given market conditions and anticipated Foundation obligations, support was lowered for 2016/2017 to \$50,000.

- The Tucson Chapter Stan Adams Memorial Scholarship funds is being created based on a 5 year pledge to create a chapter awarded scholarship. The first installment of \$6,000 will be received by June 30, 2016 and each year thereafter until June 2020 to complete this pledge. The scholarship selection will be made by the Tucson Chapter and will be awarded in 2021.
- The Foundation Trustees hybrid selection and appointment process was discussed.

Mr. Wentz moved:

- (2) that the Foundation Trustees be semi-autonomous and divorced from the appointments process and that the groups work together to find some middle ground.

**MOTION 2 PASSED** (Unanimous, CNV)

AI-7

Scholarship Trustees Attachment H

Ms. Graef moved

- (3) that the Board of Directors approve the following revision to the Rule of the Board proposed by the Scholarship Trustees:

Revising the criteria for the ASHRAE Region IV Benny Bootle Memorial Scholarship in Appendix D of the Scholarship Guidelines as follows:

- b. The recipient of the Region IV Benny Bootle Memorial Scholarship must meet the general criteria for any ASHRAE scholarship as outlined in the ASHRAE Society Scholarship Program Guidelines. ~~No candidate will be considered for the Region IV Benny Bootle Memorial Scholarship unless that person has been ranked high enough to also qualify for any of the other available ASHRAE scholarships.~~

The committee believes this change will open up more opportunities for the scholarship to be awarded. It has not been awarded for some time.

**MOTION 3 PASSED** (Unanimous, CNV)

Mr. Littleton will notify the Student Activities RVCs and provide a list of scholarships to Student Activities Chairs to distribute.

AI-8

College of Fellow/Life Members Attachments I

Ms. Patricia Adelman reported that the College of Fellows will be consulted as a resource whenever changes are proposed to the criteria or process for the Fellow Award. The COF fully supports examination and potential modification of the criteria and award process for the member grade of "Fellow"; however, these changes should not take place without the input of existing Fellows, as represented by the COF.

Ms. Adelman also reported that, at the Life Member's Luncheon, a certificate and check were presented to Dr. Michael Ohadi, the 2015-2016 E. K. Campbell recipient. The LMC is currently in the process of deciding on the 2016-17 E. K. Campbell recipient. Once it has been decided, Honors and Awards will be notified for official approval. The

recipient will be notified in July 2016 and recognized during the Las Vegas 2017 Winter Conference.

Joint Expo Policy Committee Attachment J

Mr. Littleton reported the following highlights:

- **AHR Expo® 2016 – Orlando, Florida**
  - 469,540 sq. ft. exhibition space sold (2<sup>nd</sup> largest after 2015 Chicago show (486,600 sq. ft.))
  - 2063 exhibitors, 212 first-year exhibitors, 590 international companies.
  - 30,000 pre-registrations (approximate) with an expected 60,000, including exhibitor personnel.
  - No cancellations to date due to weather.
  
- **AHR Expo® 2017 – Las Vegas, NV**
  - 412,000 square feet exhibition space sold with the potential for over 400,000 sq. ft. to be sold for the first time in the show's history.
  - 929 exhibitors (exhibitors are buying larger spaces).
  
- **AHR Expo® 2018 – Chicago, IL**
  - 525,000 square feet available
  
- **Future AHR Expo® Locations & Dates**

○ 2019 – Atlanta, GA	January 14 – 16
○ 2020 – Orlando, FL	February 3 – 5
○ 2021 – Chicago, IL	January 19 – 21
○ 2022 – Las Vegas, NV	January 31 – February 2 (Tentative)
○ 2023 – Atlanta, GA	February 6 – 8 (Tentative)
○ 2024 – Chicago, IL	January 22 – 24 (Tentative)
  
- **AHR Mexico**
  - Rotation Schedule for AHR Expo® Mexico (Attachment A)  
Alternate every other year between Mexico City and Monterrey; Guadalajara every 6<sup>th</sup> year.
  - Largest AHR Expo® Mexico to date was 2014 Mexico City (72,824 sq. ft. exhibition space sold)
  
- **2015 – Guadalajara**
  - First time AHR Expo® has been held in Guadalajara
  - 47,125 square feet exhibition space sold
  - 7,000+ attendees
  
- **2016 – Monterrey – September 20 – 22**
  - 61,755 square feet exhibition space under contract (last show in Monterrey – 66,980 square feet sold)
  
- **2018 – Mexico City – October 2 – 4**
  
- IEC approved a process that will allow chapters outside North America to request a variance from existing guidelines regarding support of conferences in their country. (Attachment B)



**Unfinished Business**NZE Standard

Mr. Underwood reported that recently representatives from several stakeholder organizations (New Buildings Institute, Architecture 2030, American Council for an Energy-Efficient Economy, Aristotle Project, AnnDyl Policy Group, and ASHRAE) met with the Manager of DOE's Building Energy Codes Program to discuss how DOE might be able to assist cities with their request to create Net Zero Energy voluntary stretch codes.

ASHRAE reached out to this group to propose that ASHRAE lead the effort. The group declined the offer and ASHRAE is not participating with this group. ASHRAE Standards Executive Committee has recommended that an ad hoc be formed to study ASHRAE's approach to the Net Zero Energy voluntary stretch codes. A report to the Executive Committee from the ad hoc will be requested to be submitted to the committee before Spring ExCom in early May 2016. At that time the ad hoc recommendations will be discussed and a path forward established.

Ms. Graef will report at the ExCom meeting in Banff the results of the Standards Ad Hoc Committee.

AI-9

American Institute of Architects(AIA)/ASHRAE Memorandum of Understanding Attachment K

Ms. Graef moved

- (4) that the Board of Directors approve the American Institute of Architects AIA/ASHRAE Memorandum of Understanding.

Discussion included:

- The AIA staff has reviewed the memorandum but it has not yet been approved by their board.
- AIA requested we change "STEM" to "STEAM", which includes a mention of Architecture.
- There were some items that were removed from the ASHRAE template to accommodate agreement.

**MOTION 4 PASSED** (Unanimous, CNV)

AI-10

IEQ-GA Proposed Bylaws Attachment L

Mr. Olesen reported that the IEQ-GA proposed bylaws should be complete and ready to approve in April. He also reported that Don Weekes would be the President of the group.

Mr. Littleton will request that legal counsel review the IEQ-GA bylaws.

AI-11

Additional discussion included:

- Process for allowing a newsletter from the Global Alliance to be published with its own logo.
- Review of all IEQ-GA publications by Technology Council before publication. This could be done by the Tech Council's document review subcommittee.

Mr. Olesen will report to Mr. Vallort when IEQ-GA documents are ready to be reviewed by Tech Council.

AI-12

Association of Facilities Engineers (AFE)/ASHRAE Memorandum of Understanding Attachment M

Mr. Olesen moved

- (5) that the Board of Directors approve the Association of Facilities Engineering (AFE)/ASHRAE Memorandum of Understanding.

There were two representatives from AFE at the conference and the AFE Board has approved the MOU.

**MOTION 5 PASSED** (Unanimous, CNV)

AI-13

International District Energy Association (IDEA)/ASHRAE Memorandum of Understanding Attachment N

Mr. Chakroun moved

- (6) that the Board of Directors approve the International District Energy Association (IDEA)/ASHRAE Memorandum of Understanding.

Discussion included that this MOU has not been sent to their board for formal approval yet but will be scheduled to do so.

**MOTION 6 PASSED** (Unanimous, CNV)

AI-14

Association of Higher Education Facilities Officers (APPA)/ASHRAE Memorandum of Understanding Attachment O

Mr. Vallort moved

- (7) that the Board of Directors approve the Association of Higher Education Facilities Officers (APPA)/ASHRAE Memorandum of Understanding.

Discussion included that this will need to be sent to their board for formal approval. This would replace the existing MOU.

**MOTION 7 PASSED** (Unanimous, CNV)

AI-15

Mr. Littleton reported that he will work with CAMEE to renew the CAMEE/ASHRAE Memorandum of Understanding which is expiring in the coming month and add this item to Spring ExCom agenda.

AI-16

New Business

Resiliency Impact on ASHRAE Documents

Mr. Wentz will work with CIBSE to develop a joint position document on resiliency impact and environmental changes.

AI-17

Participation in DiscoverE's Dream Big Program and Discover E Organizing Sponsor Attachment P

Mr. Underwood reported that DiscoverE is what was once called National Engineers Week and there are opportunities for participation.

2016 Fall Council Meetings

Mr. Wentz reported that the Board of Directors meeting in Bangkok in the fall will likely change the dynamics of the fall council meetings. There could be conference calls or webinars versus coming to Atlanta.

ExCom is requested to send ideas to Mr. Wentz regarding ideas for handling fall council meetings.

AI-18

Strategies for ASHRAE Representation at Conferences

Mr. Wentz reported that he is still collecting data regarding attendance at conferences by ASHRAE and making some educated decisions on what trips are made and who attends. There may be advantages to having the previous visitor attend the conference for continuity. Mr. Vallort will collate data and information on conference attendance.

Lawrence Berkely National Laboratory MOU

Mr. Vallort moved

- (8) that ASHRAE endorses the concept and the areas of proposed cooperation and collaboration in the field of Energy Technologies, Urban Systems and Monetization of Efficiency and Resiliency and will work together towards a memorandum of understanding.

**MOTION 8 PASSED** (Unanimous, CNV)

ExCom will review the Lawrence Berkely National Laboratory Memorandum of Understanding and discuss it at Spring ExCom and take to the Board in St. Louis if approved.

AI-19

Capital Campaign Objectives Development Attachment Q

Mr. Tim McGinn, Vice Chair of the Development Committee and Ms. Kim Mitchell, Chief Development Officer presented a detailed report to ExCom regarding the capital campaign objectives and the proposed steps moving forward.

**Board of Director Strategic Assignments Interim Reports**

MOU Tracking and Organization – Cochrane and Tsui Attachment R

Mr. Underwood reported that this working group is furthest along in their assignment.

Discussion included:

- Determining which of the memorandums of understanding are essential.
- How to most effectively track the MOUs.

- SRC's need to remove them from the Rule of the Board.

Ms. Graef will take the data from the MOU Ad Hoc and start to sort the MOUs so they can be tracked effectively.

AI-20

Effective Use of Volunteer Time – Klock and Zbin Attachment S

Mr. Underwood reported that the ad hoc studying this issue is liaising with Mr. Klock and Mr. Zbin and will be reporting in St. Louis. The results will be forwarded to Members Council for consideration.

IAQA Liaison – Miller and Fisher Attachment T

Mr. Underwood discussed that Mr. Kent Rawhouser, IAQA President reported some important issues facing IAQA and ASHRAE and that an ad hoc with Mr. Miller and Mr. Fisher and an IAQA volunteer would serve on the ad hoc.

Mr. Littleton will discuss with staff and suggest appropriate names to serve on IAQA Ad Hoc.

AI-21

Chapter Educational Offerings – Leblanc and Yelton Attachment U

No discussion

Connecting Chapter, Region and Society – Walter, Isenbeck and Mehboob Attachment V

No discussion

Technology Report to Executive Committee Attachment W

Ms. Graef moved

- (9) that ExCom authorize starting a revision of the *Environmental Tobacco Smoke (ETS)* Position Document (PD).

The proposed title, purpose and scope (TPS) is included below. Revisions are shown compared to the published position document TPS.

**Title:** Environmental Tobacco Smoke (ETS)

**Purpose:** To inform ASHRAE membership and the public about the health effects of involuntary secondary exposure to ~~tobacco~~ smoke from the combustion of tobacco.

**Scope:**

- Define what is meant by ETS, passive smoke, and involuntary secondary exposure to smoking
- Describe the types of indoor environments where ETS exposure might occur.
- Reference health effects associated with involuntary secondary exposure to tobacco smoke.
- Report on worldwide efforts to reduce/restrict involuntary secondary exposure.
- Recommend that ASHRAE members follow the guidance available in local/state code and/or ASHRAE documents/standards.

The current PD expires June 25, 2016. The revision would get 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 9 PASSED** (Unanimous, CNV)

AI-22

### Members Night Out Feedback

Mr. Underwood reported that there was some good conversation at Members Night Out regarding globalization. Organizations in smaller countries feel that ASHRAE might come in and take over. We need to better communicate who we are and what we do.

Discussion included:

- Establishing the three ad hoc committees to look at the following issues:
  - The organizational structure of all regions, including those in the U.S.
  - A new structure for Chapters that might operate within the organizational structure of another national organization.
  - The structure of the AASA.
- There is an existing members council planning subcommittee looking at the chapter structure. It was suggested that representatives from national society be brought in to participate.

Mr. Vallort reported that members consider social events fun again. Mr. Underwood reported that the social aspects of the evening were great and we are moving in the right direction. There are some cultural issues that need to be addressed. Additional thoughts included:

- Good seating arrangements.
- Sixteen VIP cancellations and 25 VIP no shows.
- Assignment of board members to tables to host guests.
- No music while eating.

### Standards User Manual Expediting

Mr. Vallort reported he is working with Standards to come up with ideas regarding expediting user manuals, especially 90.1 Standards has an ad hoc reviewing it and working on some ideas.

Mr. Gulledge reported that PEC is working with Standards to better understand the concerns.

### High Performance Building Conference

Mr. Littleton reported that Chinese Association of Refrigeration (CAR) expressed an interest in co-hosting a HPB conference with ASHRAE in China. The conference would alternate years with the existing conference that takes place every other year in California. The first joint conference with CAR is proposed for Shanghai in 2018. It would take place just before or just after China refrigeration.

Mr. Chakroun will work with CEC to investigate the possibility of partnering with CAR to run a HPB Conference in China starting in 2018.

AI-23

**Future Meetings**

Mr. Underwood reported that ExCom would meet in Banff in May for Spring ExCom and would meet in St. Louis at the Annual Meeting on Saturday, June 25, 2016.

Mr. Littleton will send a list of prospective D.C. leadership meetings so ExCom can prioritize for staff to make appointments.

**2016 – 2017 CRC Schedule Attachment X**

Attached is the most recent CRC schedule for 2016-2017 with officer and staff assignments.

**Board Orientation and Committee Appointments – March 7-10, 2016**

Mr. Wentz reported that orientation for board nominees will be held on Monday, March 7 and Tuesday, March 8. Committee appointments will follow starting late afternoon March 8<sup>th</sup> and continuing until complete.

**2016 Spring ExCom Meeting – May 1-4, 2016 Fairmont Banff Springs, Alberta CANADA**

Mr. Underwood reported that he is looking forward to hosting Spring ExCom in Canada at the Fairmont Banff Springs in Alberta, Canada. There was some discussion about the travel details.

**OTHER BUSINESS**

Marketing Department Report Attachment Y

**FINAL REVIEW OF ACTION ITEMS**

Mr. Underwood reported that the ExCom action items will be sent with the meeting minutes.

**Executive Session**

The Executive Committee had several sessions during the three-day meeting and all discussions are covered in the Executive Session minutes.

**Adjournment**

Mr. Underwood thanked everyone for coming. The meeting was adjourned on Thursday, January 28, 2016



Jeff H. Littleton, Secretary

Mdt/2016-04-04

Distribution: Board of Directors  
Staff Directors

- Attachments:
- A. Report of the President
  - B. Report of the Treasurer
  - C. North American Technician Excellence Report
  - D. CLIMA Ad Hoc Committee
  - E. Advanced Energy Design Guide Steering Committee
  - F. President-Elect Advisory Committee
  - G. Foundation Trustees
  - H. Scholarship Trustees
  - I. College of Fellows/Life Members
  - J. Joint Expo Policy Committee
  - K. American Institute of Architects/ASHRAE MOU
  - L. IEQ-GA Proposed Bylaws
  - M. Association of Facilities Engineers/ASHRAE MOU
  - N. International District Energy Association/ASHRAE MOU
  - O. Association of Higher Education Facilities Officers/ASHRAE MOU
  - P. DiscoverE's Big Program and Organizing Sponsor
  - Q. Capital Campaign Objectives Development
  - R. MOU Tracking and Organization – Cochrane and Tsui
  - S. Effective Use of Volunteer Time – Klock and Zbin
  - T. IAQA Liaison – Miller and Fisher
  - U. Chapter Educational Offerings – Leblanc and Yelton
  - V. Connecting Chapters, Region and Society – Walter, Isenbeck and Mehboob
  - W. Technology Report to Executive Committee
  - X. 2016-2017 CRC Schedule
  - Y. Marketing Department Report

**Report of President David Underwood  
ASHRAE Travel for July 1, 2015  
Through January 31, 2016**

<b>Date</b>	<b>Meeting</b>	<b>Location</b>	<b>Comments</b>
July 9-11	Senior Leaders	Niagara-on-the-Lake ON	
July 22-26	Region IX CRC	Rapid City, SD	
August 5-9	Region IV CRC	Raleigh, NC	
August 12-16	Region X CRC	Los Gatos, CA	
August 25-30	Region XIII	Manila, Philippines	148 students participated
August 25-30	XIV EXPOACAIRE, Colombia Chapter	Medellin, Colombia	
September 18-23	CONBRAVA, Brasil Chapter	Sao Paulo, Brasil	Negotiated with Brasil code body regarding translation of our standards
September 24-26	Chile Chapter	Santiago, Chile	Inaugural meeting with more than 100 participants including architects, contractors and government officials
September 29 - October 5	RAL CRC	Istanbul, Turkey	MOU signed between ISHRAE and Pakistan HVAC&R association
October 6-13	CIBSE/BSRIA/IMechE	London, England	
October 13-16	Washington Leadership Meeting	Washington, DC	
October 19-21	AHR Mexico	Guadalajara, Mexico	
October 22-25	AABC Conference	Los Cabos, Mexico	
November 5-8	ASHRAE Board Meeting	Atlanta, GA	
November 9-13	Space Coast Chapter, Central Florida Chapter, Southwest Florida Chapter, Florida West Coast Chapter	Various Florida locations	
November 17-20	13 <sup>th</sup> Asia Pacific Conference on the Built Environment	Hong Kong	
November 30 – December 5	46 <sup>th</sup> International Congress & Exhibition on HVAC&R and Danube Chapter	Belgrade, Serbia	
December 6-9	2 <sup>nd</sup> Energy Management & Exhibition and Bahrain Chapter	Manama, Bahrain	
December 15-17	SoCal Chapter, Orange Empire Chapter, Tri County Chapter, San Joaquin Chapter	Los Angeles, CA and Sacramento, CA	
January 5-7	Arkansas Chapter, NW Arkansas Section	Little Rock, AR and Fayetteville, AR	
January 12-15	NIBS Conference	Washington, DC	Meetings with DOE, White House staff and the Canadian staff
January 20-28	ASHRAE Winter Conference & AHR Exhibition	Orlando, FL	



**ASHRAE  
GENERAL, RESEARCH, COF AND LIFE MEMBERS FUNDS  
STATEMENT OF FINANCIAL POSITION - COMPARATIVE  
December 31, 2015**

	<b>12/31/15</b>	One Year Ago 12/31/14	Two Years Ago 12/31/13	Three Years Ago 12/31/12	Four Years Ago 12/31/11	Five Years Ago 12/31/10	Six Years Ago 12/31/09
1 Cash	\$1,767,097	\$1,383,660	\$1,631,329	\$1,508,701	\$2,053,220	\$1,550,802	\$1,519,308
2 Marketable Securities at Market Value	17,912,034	18,332,734	17,349,012	14,553,223	12,745,610	12,701,873	11,077,201
3 Accounts Receivable	1,161,450	1,010,764	947,736	1,257,999	1,272,876	1,054,237	703,565
4 Less: Allowance for Uncollectable Accounts	(274,879)	(185,206)	(90,109)	(150,971)	(126,572)	(119,732)	(67,770)
5 Miscellaneous Receivables & Deposits	27,067	10,594	10,650	14,191	13,579	16,223	19,483
6 Inventory	437,236	555,392	579,665	479,360	401,344	491,731	427,244
7 Prepaid Expense	684,004	438,001	562,359	525,783	382,417	783,707	580,459
8 Property and Equipment-Remaining Value	6,153,951	6,517,196	7,080,454	7,579,493	7,950,158	8,684,395	9,155,262
9 Due To (From) Other Funds			170				
<b>10 TOTAL ASSETS</b>	<b>27,867,960</b>	28,063,135	28,071,266	25,767,779	24,692,632	25,163,236	23,414,752
11 Accounts Payable & Accrued Expenses	6,119,618	5,361,913	5,571,836	5,708,001	5,511,968	5,800,498	4,899,090
12 Refundable Advances	7,690	9,898	969	1,691	10,807	3,623	626,096
13 Deferred Income	7,245,188	6,985,489	6,709,977	6,263,203	6,184,417	6,087,108	4,920,514
<b>14 TOTAL LIABILITIES</b>	<b>13,372,496</b>	12,357,300	12,282,782	11,972,895	11,707,192	11,891,229	10,445,700
15 Net Assets Beginning of Year	18,454,905	18,367,630	16,741,805	16,304,968	16,657,249	14,141,076	14,003,661
16 Net Assets -Surplus/(Deficit) for Current Yr	(3,959,441)	(2,661,795)	(953,321)	(2,510,084)	(3,671,809)	(869,069)	(1,034,609)
<b>18 TOTAL LIABILITIES &amp; NET ASSETS</b>	<b>27,867,960</b>	28,063,135	28,071,266	25,767,779	24,692,632	25,163,236	23,414,752
<b>19 NET ASSETS TO DATE</b>	<b>14,495,464</b>	15,705,835	15,788,484	13,794,884	12,985,440	13,272,007	12,969,052

**ASHRAE CONSOLIDATED (excl Foundation)**  
**STATEMENT OF REVENUES & EXPENSES**  
For the Six Months Ending December 31, 2015

in thousands US dollars

MONTH OF DEC		Fiscal YTD Through Month of DEC				TWELVE MONTHS ENDING JUNE 30						DRAFT	DRAFT	DRAFT		
Actual	Actual	Budget	Actual	Budget	Actual	Budget	roll up	Actual	Actual	Budget	Actual	Forecast	Budget	Budget	Budget	
FY 14-15	FY 15-16	FY 15-16	FY 14-15	FY 14-15	FY 15-16	FY 15-16	acct / Description	FY 12-13	FY 13-14	FY 14-15	FY 14-15	FY 15-16	FY 15-16	FY 16-17	FY 17-18	FY 18-19
\$633.4	\$648.2	\$661.2	\$3,671.2	\$3,604.0	\$3,776.5	\$3,833.9	<b>REVENUES</b>									
230.0	221.9	271.9	1,597.4	1,948.3	1,652.9	1,750.0	31 Membership Dues Earned Income	\$7,221.9	\$7,325.3	\$7,544.6	\$7,430.5	\$7,750.2	\$7,750.2	\$7,985.4	\$8,189.0	\$8,352.8
360.7	361.2	357.7	1,597.2	1,773.8	1,764.6	1,645.4	32 Publication Sales Income	3,323.4	3,803.6	3,896.5	3,483.9	3,781.4	3,585.5	3,840.5	4,028.4	4,106.6
3.0	2.6	2.4	14.2	8.4	10.3	11.1	34 Advertising Income - Display	3,856.1	3,773.1	3,897.0	3,710.8	3,862.1	3,761.0	3,816.0	3,957.8	4,035.6
36.8	49.5	41.4	297.2	310.0	322.2	325.4	34 Advertising Income - Classified	19.3	26.5	16.9	32.0	25.0	25.0	25.0	25.0	25.5
1.9	4.4	22.5	155.2	192.2	139.4	130.0	34 Advertising Income - On-line	525.4	470.4	620.0	595.6	660.0	640.0	650.0	702.0	716.0
27.7	27.7	33.2	96.0	80.0	88.8	115.2	35.1 Meeting & Seminar Income	1,535.2	1,965.7	1,666.3	1,578.5	1,737.5	1,737.5	1,809.8	1,646.5	1,679.4
20.3	45.3	23.1	636.5	725.2	681.8	647.9	35.2 Certification Registration	138.7	148.5	160.0	183.3	195.0	220.0	295.0	350.0	400.0
			21.8	90.0	3.2		35.3 Education Registration	1,011.3	1,301.6	1,450.4	1,504.5	1,560.0	1,585.0	1,700.0	1,853.0	1,892.1
119.9	149.1	126.1	445.6	503.9	494.8	446.6	37 Special Project Income	519.3	105.0	240.0	316.6					
		(4.8)	10.0	10.0	10.0	(18.6)	38 Contribution Income	1,845.8	1,945.6	2,160.9	2,116.6	2,249.4	2,249.4	2,325.8	2,430.8	2,479.4
			145.9	60.0	34.0	60.0	41.1 AHR Exposition Income	3,949.9	3,973.0	4,857.9	5,146.6	4,757.6	4,757.6	4,883.0	5,702.5	4,700.0
73.8	54.6	58.3	442.9	443.7	327.6	349.8	41.2 Contributions and Matching Gifts	70.0	130.0	115.0	115.0	59.4	59.4	61.6	66.4	67.7
27.4	6.7	13.9	242.0	193.6	99.3	123.2	41.3 Exposition Income - Other Countries	116.3		60.0	145.9	34.0	60.0	84.0		
							44 Reserve Transfers	701.3	1,025.5	887.5	885.7	641.4	641.4	878.9	986.8	1,006.6
							46 Miscellaneous Income	286.4	340.7	414.0	534.4	309.1	299.1	310.6	315.3	321.3
1,534.9	1,571.2	1,606.9	9,373.1	9,943.1	9,405.4	9,419.9	<b>TOTAL REVENUES</b>	<b>25,120.3</b>	<b>26,334.5</b>	<b>27,987.0</b>	<b>27,779.9</b>	<b>27,622.1</b>	<b>27,371.1</b>	<b>28,665.6</b>	<b>30,253.5</b>	<b>29,783.0</b>
							<b>EXPENSES:</b>									
588.6	656.8	670.4	3,848.4	3,949.9	4,309.8	4,436.3	51 Salary Expense	7,328.8	7,523.6	7,899.7	7,910.9	8,378.0	8,403.1	8,717.6	9,049.5	9,230.5
195.4	204.6	192.5	1,205.7	1,144.7	1,303.4	1,242.7	52 Payroll Taxes, Benefits, Personnel Exp	2,212.2	2,257.7	2,289.5	2,505.0	2,525.1	2,392.2	2,698.6	2,699.3	2,753.2
277.0	379.4	277.5	1,420.1	1,892.7	1,731.8	1,504.8	61 Publishing and Promotion Expense	3,641.9	3,569.1	3,785.4	3,776.9	3,938.1	3,777.2	3,710.2	3,829.7	3,908.3
35.1	202.8	92.1	526.4	499.2	657.9	718.4	64 Meetings & Conferences Expense	1,789.8	2,293.1	2,205.1	2,199.2	2,299.1	2,279.1	2,376.1	2,165.3	2,208.6
66.0	87.3	93.8	879.1	1,198.4	691.3	1,141.0	66 Travel Expense	1,743.5	2,265.6	2,398.9	2,076.6	2,319.3	2,321.5	2,421.9	2,434.1	2,481.6
16.4	23.8	5.4	73.2	71.7	83.1	77.2	68 Awards, Certif, Logo Cost of Goods Sold	132.4	119.7	143.4	164.6	149.2	149.2	403.7	159.8	163.0
284.7	184.0	264.1	1,332.3	1,670.9	1,081.5	1,647.3	71 Research Projects & Grants Expense	2,462.4	2,649.6	2,898.9	2,469.6	2,678.0	2,678.0	3,027.2	3,112.5	3,174.8
			9.2	6.1	50.0	55.0	73 Special Projects Expense	466.2	50.0	160.0	72.5	110.0	110.0			
6.3		6.1	25.2	29.9	46.8	25.5	76 Public Relations Expense	70.3	129.1	59.9	51.0	62.3	62.3	64.1	66.7	68.0
53.2	51.8	58.2	285.4	274.9	307.8	319.1	78 Occupancy & Insurance	501.5	563.4	549.8	559.2	575.9	575.9	595.7	619.5	631.9
170.3	152.8	122.7	794.8	964.5	906.9	800.0	82 Office Expense and Organizational Dues	1,709.6	1,746.9	1,929.0	1,840.2	1,950.8	1,892.7	1,967.7	2,045.5	2,085.8
162.0	127.1	197.5	678.8	907.2	727.7	986.7	84 Outside Services Expense	1,430.1	1,528.0	1,814.3	1,659.7	2,035.0	1,980.0	2,454.6	2,058.4	2,035.6
121.3	79.5	101.7	211.7	222.7	362.6	238.3	88 Other Expense	529.8	542.9	530.2	530.8	573.0	555.6	569.0	585.9	598.3
(39.1)	(225.1)		(122.4)	(32.4)	(532.2)		88.1 Prepaid Expense (contra acct)		(18.3)	(64.9)	33.8					
		8.3				50.0	89 Opportunity Fund			35.0	100.0	100.0	100.0	100.0	100.0	102.0
51.4	50.6	49.5	304.5	307.1	292.8	292.7	90 Depreciation Expense	695.6	660.9	614.2	631.9	543.5	543.5	543.9	565.7	577.0
		2.9				2.3	91 Allocation of Overhead & BOD									
1,988.6	1,975.4	2,151.9	11,469.3	13,101.4	12,021.2	13,537.3	<b>TOTAL EXPENSES</b>	<b>24,714.1</b>	<b>25,916.3</b>	<b>27,313.4</b>	<b>26,517.4</b>	<b>28,237.3</b>	<b>27,820.3</b>	<b>29,650.3</b>	<b>29,491.9</b>	<b>30,018.6</b>
(453.7)	(404.2)	(545.0)	(2,096.2)	(3,158.3)	(2,615.8)	(4,117.4)	<b>SURPLUS (DEFICIT) before reserve income</b>	<b>406.2</b>	<b>418.2</b>	<b>673.6</b>	<b>1,262.5</b>	<b>(615.2)</b>	<b>(449.2)</b>	<b>(984.7)</b>	<b>761.6</b>	<b>(235.6)</b>
			153.9				91.5 Headquarters Building Renewal Contributions		0.3							
62.0	75.2	60.6	210.2	150.0	302.0	210.5	91.7 Gain on Merger				153.9					
							92 Non-recurring Expenses	1,244.8	488.9	300.0	670.7	590.0	590.0			
(55.0)	(361.9)	210.9	(66.2)	534.9	(709.4)	550.3	<b>Reserve Investment Income:</b>									
(73.8)	(54.6)	(58.3)	(442.9)	(368.7)	(327.6)	(349.9)	95 Investmt Income - Reserves (net of exp)	1,977.1	2,721.8	1,069.7	222.5	496.1	923.0	969.0	1,067.0	1,088.3
							96 Transfer Reserves Portion Used Currently	(701.3)	(1,025.5)	(737.5)	(885.7)	(641.4)	(641.4)	(878.9)	(986.8)	(1,006.5)
(128.8)	(416.5)	152.6	(509.1)	166.2	(1,037.0)	200.4	Remaining Reserve Investment Income	1,275.8	1,696.3	332.2	(663.2)	(145.3)	281.6	90.1	80.2	81.8
(644.5)	(895.9)	(453.0)	(2,661.6)	(3,142.1)	(3,954.8)	(4,127.5)	<b>OVERALL SURPLUS (DEFICIT) after reserve income</b>	<b>437.2</b>	<b>1,625.9</b>	<b>705.8</b>	<b>82.5</b>	<b>(1,350.5)</b>	<b>(757.6)</b>	<b>(894.6)</b>	<b>841.8</b>	<b>(153.8)</b>

**GENERAL (Fund 2)**  
**STATEMENT OF REVENUES & EXPENSES**  
**For the Six Months Ending December 31, 2015**

in thousands US dollars

MONTH OF DEC			Fiscal YTD Through Month of DEC				TWELVE MONTHS ENDING JUNE 30							DRAFT	DRAFT	DRAFT	
Actual	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Actual	Budget	Actual	Forecast	Budget	Budget	Budget			
FY 14-15	FY 15-16	FY 15-16	FY 14-15	FY 14-15	FY 15-16	FY 15-16	roll up	FY 12-13	FY 13-14	FY 14-15	FY 14-15	FY 15-16	FY 15-16	FY 16-17	FY 17-18	FY 18-19	acct / Description
\$620.8	\$635.2	\$646.8	\$3,597.7	\$3,525.7	\$3,700.9	\$3,750.4		\$7,077.4	\$7,178.7	\$7,388.0	\$7,281.8	\$7,595.7	\$7,595.7	\$7,828.6	\$8,026.3	\$8,186.8	31 Membership Dues Earned Income
230.0	221.9	271.9	1,597.4	1,948.3	1,652.9	1,750.0		3,323.4	3,803.6	3,896.5	3,483.9	3,781.4	3,585.5	3,840.5	4,028.4	4,106.6	32 Publication Sales Income
360.7	361.2	357.7	1,597.2	1,773.8	1,764.6	1,645.4		3,856.1	3,773.1	3,897.0	3,710.8	3,862.1	3,761.0	3,816.0	3,957.8	4,035.6	34 Advertising Income - Display
3.0	2.6	2.4	14.2	8.4	10.3	11.1		19.3	26.5	16.9	32.0	25.0	25.0	25.0	25.0	25.5	34 Advertising Income - Classified
36.8	49.5	41.4	297.2	310.0	322.2	325.4		525.4	470.4	620.0	595.6	660.0	640.0	650.0	702.0	716.0	34 Advertising Income - On-line
1.9	4.4	22.5	155.2	192.2	139.4	130.0		1,535.2	1,965.7	1,666.3	1,578.5	1,737.5	1,737.5	1,809.8	1,646.5	1,679.4	35.1 Meeting & Seminar Income
27.7	27.7	33.2	96.0	80.0	88.8	115.2		138.7	148.5	160.0	183.3	195.0	220.0	295.0	350.0	400.0	35.2 Certification Registration
20.3	45.3	23.1	636.5	725.2	681.8	647.9		1,011.3	1,301.6	1,450.4	1,504.5	1,560.0	1,585.0	1,700.0	1,853.0	1,892.1	35.3 Education Registration
	0.9	0.6	21.8	90.0	3.2			60.9	50.0	240.0	316.6						37 Special Project Income
			12.3	19.8	11.2	6.3		31.3	47.2	39.5	72.7	30.4	30.4	31.0	32.3	32.9	38 Contribution Income
		(4.8)	10.0	10.0	10.0	(18.6)		3,949.9	3,973.0	4,857.9	5,146.6	4,757.6	4,757.6	4,883.0	5,702.5	4,700.0	41.1 AHR Exposition Income
			145.9	60.0	34.0	60.0		(1,940.9)	(1,859.2)	(1,699.5)	(1,699.5)	(1,839.0)	(1,839.0)	(2,059.8)	(2,152.6)	(1,761.2)	41.2 Contributions and Matching Gifts
26.2	33.2	36.2	157.2	157.2	199.2	217.3		116.3		60.0	145.9	34.0	60.0	84.0			41.3 Exposition Income - Other Countries
27.4	6.7	13.6	242.0	192.1	99.3	121.5		510.9	489.2	314.5	314.5	398.4	398.4	621.4	719.0	733.4	44 Reserve Transfers
								286.4	341.9	410.9	534.4	305.9	295.9	307.2	311.8	317.7	46 Miscellaneous Income
1,355.7	1,388.6	1,444.6	8,580.6	9,092.7	8,717.8	8,761.9		20,501.6	21,710.2	23,318.4	23,201.6	23,104.0	22,853.0	23,831.7	25,202.0	25,064.8	<b>TOTAL REVENUES</b>
547.1	614.3	623.6	3,573.9	3,676.8	4,022.4	4,126.8		6,814.3	6,988.0	7,353.7	7,357.2	7,807.2	7,832.3	8,129.7	8,438.0	8,606.8	51 Salary Expense
183.0	192.6	179.7	1,127.7	1,068.3	1,219.1	1,161.7		2,070.3	2,105.2	2,136.6	2,344.1	2,365.4	2,241.5	2,523.6	2,528.1	2,578.5	52 Payroll Taxes, Benefits, Personnel Exp
272.2	378.2	266.5	1,408.7	1,841.6	1,697.5	1,451.8		3,596.3	3,524.7	3,683.1	3,757.5	3,834.8	3,673.9	3,681.1	3,799.3	3,877.3	61 Publishing and Promotion Expense
35.1	202.8	91.6	510.7	499.2	637.7	706.6		1,778.3	2,286.6	2,189.6	2,178.5	2,282.2	2,262.2	2,358.7	2,147.2	2,190.1	64 Meetings & Conferences Expense
65.2	87.1	92.6	806.4	1,130.9	645.3	1,054.6		1,634.3	2,138.0	2,263.8	1,954.6	2,187.9	2,190.1	2,289.6	2,296.9	2,341.7	66 Travel Expense
6.3	13.8	5.3	28.0	56.0	37.7	45.0		99.4	86.9	112.0	98.9	116.5	116.5	370.0	124.8	127.3	68 Awards, Certif, Logo Cost of Goods Sold
(5.0)		(6.4)	86.8	115.0	109.0	110.8		106.3	106.5	122.6	100.9	127.5	127.5	131.3	136.6	139.3	71 Research Projects & Grants Expense
		9.2	6.1		50.0	55.0		7.8	50.0	160.0	72.5	110.0	110.0				73 Special Projects Expense
6.3		6.1	25.2	29.8	46.8	25.4		70.3	129.1	59.7	51.0	62.0	62.0	63.9	66.5	67.8	76 Public Relations Expense
53.2	51.8	58.2	285.4	274.9	307.8	319.1		501.5	563.4	549.8	559.2	575.9	575.9	595.7	619.5	631.9	78 Occupancy & Insurance
166.6	151.6	118.3	766.6	937.0	877.1	771.2		1,668.6	1,704.0	1,873.9	1,788.1	1,893.5	1,835.4	1,908.8	1,984.1	2,023.2	82 Office Expense and Organizational Dues
162.0	126.9	197.5	678.4	907.2	727.5	986.7		1,430.1	1,528.0	1,814.3	1,654.6	2,035.0	1,980.0	2,454.6	2,058.4	2,035.6	84 Outside Services Expense
118.1	76.3	94.7	200.7	191.8	348.9	214.3		493.0	496.8	468.4	487.8	508.7	491.4	502.8	517.1	528.0	88 Other Expense
(39.1)	(225.1)		(122.4)	(32.4)	(532.2)				(18.3)	(64.9)	33.8						88.1 Prepaid Expense (contra acct)
		8.3				50.0			35.0	100.0	35.5	100.0	100.0	100.0	100.0	102.0	89 Opportunity Fund
51.4	50.6	49.5	304.5	307.1	292.8	292.7		695.6	660.9	614.2	631.9	543.5	543.5	543.9	565.7	577.0	90 Depreciation Expense
(61.5)	(55.8)	(68.1)	(382.1)	(396.0)	(357.4)	(438.9)		(649.4)	(730.0)	(792.0)	(808.5)	(854.0)	(840.0)	(851.7)	(941.7)	(960.5)	91 Allocation of Overhead & BOD
1,560.9	1,665.1	1,726.6	9,304.6	10,607.2	10,130.0	10,932.8		20,316.7	21,654.8	22,644.8	22,297.6	23,696.1	23,302.2	24,802.0	24,440.5	24,866.0	<b>TOTAL EXPENSES</b>
(205.2)	(276.5)	(282.0)	(724.0)	(1,514.5)	(1,412.2)	(2,170.9)		184.9	55.4	673.6	904.0	(592.1)	(449.2)	(970.3)	761.5	198.8	<b>SURPLUS (DEFICIT) before reserve income</b>
62.0	75.2	60.6	210.2	150.0	302.0	210.5			0.3								91.5 Headquarters Building Renewal Contributions
								1,244.8	488.9	300.0	670.7	590.0	590.0				92 Non-recurring Expenses
(35.3)	(234.3)	155.1	(40.3)	359.5	(460.2)	370.9		1,277.1	1,778.1	719.0	146.5	339.6	603.0	633.0	714.0	728.3	<b>Reserve Investment Income:</b>
(26.2)	(33.2)	(36.2)	(157.2)	(259.0)	(199.2)	(217.3)		(510.9)	(489.2)	(518.1)	(314.5)	(398.4)	(398.4)	(621.4)	(719.0)	(733.4)	95 Investmt Income - Reserves (net of exp)
																	96 Transfer Reserves Portion Used Currently
(61.5)	(267.5)	118.9	(197.5)	100.5	(659.4)	153.6		766.2	1,288.9	200.9	(168.0)	(58.8)	204.6	11.6	(5.0)	(5.1)	Remaining Reserve Investment Income
(328.7)	(619.2)	(223.7)	(1,131.7)	(1,564.0)	(2,373.6)	(2,227.8)		(293.7)	855.7	574.5	65.3	(1,240.9)	(834.6)	(958.7)	756.5	193.7	<b>OVERALL SURPLUS (DEFICIT) after reserve income</b>
												(1,241.2)	(0.3)				

**BOARD OF DIRECTORS 2-5nn**  
**STATEMENT OF REVENUES & EXPENSES**  
**For the Six Months Ending December 31, 2015**

in thousands US dollars

MONTH OF DEC			Fiscal YTD Through Month of DEC				TWELVE MONTHS ENDING JUNE 30						DRAFT	DRAFT	DRAFT	
Actual FY 14-15	Actual FY 15-16	Budget FY 15-16	Actual FY 14-15	Budget FY 14-15	Actual FY 15-16	Budget FY 15-16	roll up acct / Description	Actual FY 12-13	Actual FY 13-14	Budget FY 14-15	Actual FY 14-15	Forecast FY 15-16	Budget FY 15-16	Budget FY 16-17	Budget FY 17-18	Budget FY 18-19
\$0.3		\$0.1 (4.8)	\$9.0	\$4.0		\$3.1 (29.0)	<b>REVENUES</b>									
							38 Contribution Income	\$14.9	\$4.5	\$8.0	\$23.5	\$8.0	\$8.0	\$8.0	\$8.3	\$8.5
26.0			117.0	20.0	0.3		41.2 Contributions and Matching Gifts					(58.0)	(58.0)	(58.0)	(58.0)	(59.2)
							46 Miscellaneous Income	3.0	2.5	40.0	273.0			5.0	5.2	5.3
26.3		(4.7)	126.0	24.0	0.3	(25.9)	<b>TOTAL REVENUES</b>	<b>17.9</b>	<b>7.0</b>	<b>48.0</b>	<b>296.5</b>	(50.0)	(50.0)	(45.0)	(44.5)	(45.4)
							<b>EXPENSES:</b>									
79.2	88.4	77.9	539.3	434.3	583.1	592.9	51 Salary Expense	771.5	735.7	868.6	1,032.7	1,039.3	1,039.3	1,070.5	1,113.3	1,135.5
23.6	27.4	21.2	153.1	121.6	171.5	155.5	52 Payroll Taxes, Benefits, Personnel Exp	224.1	214.4	243.2	287.0	286.7	274.4	316.4	311.7	318.0
	0.8	5.4	2.5	48.7	4.9	49.2	61 Publishing and Promotion Expense	32.8	69.4	97.5	10.0	107.3	107.3	127.7	132.2	134.9
5.7	8.4	6.0	22.4	3.9	22.4	23.5	64 Meetings & Conferences Expense	39.0	71.0	58.8	64.0	61.6	61.6	66.7	69.6	71.0
29.8	56.6	45.9	296.1	489.3	237.0	444.5	66 Travel Expense	650.8	1,017.9	978.6	887.9	1,036.8	1,036.8	1,037.3	1,011.6	1,031.9
	0.4	0.1	4.7	1.8	1.1	0.8	68 Awards, Certif, Logo Cost of Goods Sold	9.2	9.1	3.5	14.9	3.7	3.7	3.8	3.9	4.0
							71 Research Projects & Grants Expense	7.0	7.1	7.5	7.2	7.8	7.8	8.1	8.4	8.6
7.4	2.6	4.2	35.0	17.5	18.6	24.5	76 Public Relations Expense									
20.6	1.9	20.6	83.9	68.4	36.7	135.2	82 Office Expense and Organizational Dues	42.2	42.6	35.1	60.5	44.8	44.8	43.4	44.9	45.8
		0.9		0.6		5.3	84 Outside Services Expense	92.4	69.2	136.9	204.6	191.6	191.6	125.3	125.3	127.8
							88 Other Expense	5.3	0.5	2.5	1.9	10.6	10.6	2.7	2.8	2.9
							88.1 Prepaid Expense (contra acct)									
		8.3				50.0	89 Opportunity Fund		35.0	100.0	35.5	100.0	100.0	100.0	100.0	102.0
0.3			2.0	1.5	0.2		90 Depreciation Expense	4.1	4.1	3.1	3.2					
(166.7)	(145.3)	(211.3)	(1,138.8)	(1,267.7)	(832.7)	(1,443.6)	91 Allocation of Overhead & BOD	(1,878.5)	(2,277.4)	(2,535.3)	(2,584.6)	(2,877.9)	(2,877.9)	(2,803.0)	(2,923.7)	(2,982.1)
(0.1)	(0.1)	(20.8)	0.2	(80.1)	0.1	37.8	<b>TOTAL EXPENSES</b>	<b>(0.1)</b>	<b>(0.2)</b>	<b>24.9</b>	<b>12.3</b>			<b>98.9</b>	<b>0.3</b>	
26.4	0.1	16.1	125.8	104.1	0.2	(63.7)	<b>SURPLUS (DEFICIT) before reserve income</b>	<b>18.0</b>	<b>7.2</b>	<b>48.0</b>	<b>271.6</b>	<b>(62.3)</b>	<b>(50.0)</b>	<b>(143.9)</b>	<b>(44.5)</b>	<b>(45.7)</b>
26.4	0.1	16.1	125.8	104.1	0.2	(63.7)	<b>OVERALL SURPLUS (DEFICIT) after reserve income</b>	<b>18.0</b>	<b>7.2</b>	<b>48.0</b>	<b>271.6</b>	<b>(62.3)</b>	<b>(50.0)</b>	<b>(143.9)</b>	<b>(44.5)</b>	<b>(45.7)</b>

**OVERHEAD 2-9nn**  
**STATEMENT OF REVENUES & EXPENSES**  
**For the Six Months Ending December 31, 2015**

in thousands US dollars

MONTH OF DEC			Fiscal YTD Through Month of DEC				TWELVE MONTHS ENDING JUNE 30						DRAFT	DRAFT	DRAFT	
Actual	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Actual	Budget	Actual	Forecast	Budget	Budget	Budget	Budget	
FY 14-15	FY 15-16	FY 15-16	FY 14-15	FY 14-15	FY 15-16	FY 15-16	FY 12-13	FY 13-14	FY 14-15	FY 14-15	FY 15-16	FY 15-16	FY 16-17	FY 17-18	FY 18-19	
							roll up									
							acct / Description									
							<b>REVENUES</b>									
							41.1 AHR Exposition Income	\$3,949.9	\$3,973.0	\$4,857.9	\$5,146.6	\$4,757.6	\$4,757.6	\$4,883.0	\$5,702.5	\$4,700.0
							41.2 Contributions and Matching Gifts	(2,010.9)	(1,989.2)	(1,814.5)	(1,814.5)	(1,898.4)	(1,898.4)	(2,121.4)	(2,219.0)	(1,828.9)
							41.3 Exposition Income - Other Countries	116.3		60.0	145.9	34.0	60.0	84.0		
26.2	33.2	36.2	145.9	60.0	34.0	60.0	44 Reserve Transfers	510.9	489.2	314.5	314.5	398.4	398.4	621.4	719.0	733.4
(3.8)	(4.4)	0.9	157.2	157.2	199.2	217.3	46 Miscellaneous Income	17.0	24.0	58.6	(47.2)	31.7	31.7	32.0	33.2	33.9
22.4	28.8	37.1	298.3	246.5	223.1	295.2	<b>TOTAL REVENUES</b>	<b>2,583.2</b>	<b>2,497.0</b>	<b>3,476.5</b>	<b>3,745.3</b>	<b>3,323.3</b>	<b>3,349.3</b>	<b>3,499.0</b>	<b>4,235.7</b>	<b>3,638.4</b>
							<b>EXPENSES:</b>									
128.7	163.4	151.9	841.7	994.3	1,036.2	987.7	51 Salary Expense	1,693.5	1,784.0	1,988.6	1,862.3	2,144.7	2,062.2	2,201.3	2,287.1	2,332.9
38.4	49.2	44.9	319.4	296.1	315.9	324.6	52 Payroll Taxes, Benefits, Personnel Exp	513.4	534.2	592.2	715.2	702.5	669.0	701.1	755.7	770.8
0.4	0.5	0.5	2.8	18.7	3.5	2.4	61 Publishing and Promotion Expense	8.2	5.1	37.5	21.8	41.8	26.8	27.6	28.6	29.2
0.5	0.6	1.0	4.4	6.3	5.2	8.8	64 Meetings & Conferences Expense	19.6	7.8	12.8	10.7	13.3	13.3	13.7	14.2	14.5
1.4	0.9	2.5	47.8	41.8	53.0	49.9	66 Travel Expense	95.1	92.4	83.6	87.0	87.0	87.0	89.6	93.2	95.0
6.3		5.9	25.2	28.7	46.8	24.2	76 Public Relations Expense	61.8	127.9	57.3	50.9	59.6	59.6	61.4	63.9	65.2
50.6	49.6	55.2	269.3	255.6	281.1	297.8	78 Occupancy & Insurance	464.8	527.1	511.2	523.2	535.8	535.8	554.4	576.6	588.1
61.4	29.8	29.5	204.4	169.4	189.3	188.6	82 Office Expense and Organizational Dues	310.9	328.2	338.7	374.5	352.4	352.4	363.9	379.6	387.2
54.4	28.8	50.3	270.4	268.6	252.3	269.6	84 Outside Services Expense	429.4	478.7	537.3	454.8	502.0	502.0	513.9	535.7	546.4
11.5	17.7	9.0	47.7	34.6	53.8	41.0	88 Other Expense	60.7	93.5	69.3	83.7	72.1	72.1	74.2	77.2	78.7
44.0	48.3	49.5	260.1	275.3	279.2	292.7	90 Depreciation Expense	603.5	568.8	550.5	556.0	543.5	543.5	543.9	565.7	577.0
(397.6)	(388.8)	(454.9)	(2,293.3)	(2,389.5)	(2,516.2)	(2,623.6)	91 Allocation of Overhead & BOD	(4,261.0)	(4,547.6)	(4,779.0)	(4,740.0)	(5,054.7)	(4,923.7)	(5,090.4)	(5,377.5)	(5,485.1)
							<b>TOTAL EXPENSES</b>	<b>(0.1)</b>	<b>0.1</b>	<b>0.1</b>				<b>54.6</b>	<b>(0.1)</b>	
22.4	28.8	91.8	298.4	246.6	223.0	431.5	<b>SURPLUS (DEFICIT) before reserve income</b>	<b>2,583.3</b>	<b>2,496.9</b>	<b>3,476.5</b>	<b>3,745.2</b>	<b>3,323.3</b>	<b>3,349.3</b>	<b>3,444.4</b>	<b>4,235.7</b>	<b>3,638.5</b>
6.6	27.4		18.0		98.5		91.5 Headquarters Building Renewal Contributions		0.3							
							92 Non-recurring Expenses	86.0	14.0		192.4	90.0	90.0			
(35.3)	(234.3)	155.1	(40.3)	359.5	(460.2)	370.9	<b>Reserve Investment Income:</b>									
(26.2)	(33.2)	(36.2)	(157.2)	(259.0)	(199.2)	(217.3)	95 Investmt Income - Reserves (net of exp)	1,277.1	1,778.1	719.0	146.5	339.6	603.0	633.0	714.0	728.3
							96 Transfer Reserves Portion Used Currently	(510.9)	(489.2)	(518.1)	(314.5)	(398.4)	(398.4)	(621.4)	(719.0)	(733.4)
(61.5)	(267.5)	118.9	(197.5)	100.5	(659.4)	153.6	Remaining Reserve Investment Income	766.2	1,288.9	200.9	(168.0)	(58.8)	204.6	11.6	(5.0)	(5.1)
(45.7)	(266.1)	210.7	82.9	347.1	(534.9)	585.1	<b>OVERALL SURPLUS (DEFICIT) after reserve income</b>	<b>3,263.5</b>	<b>3,772.1</b>	<b>3,677.4</b>	<b>3,384.8</b>	<b>3,174.5</b>	<b>3,463.9</b>	<b>3,456.0</b>	<b>4,230.7</b>	<b>3,633.4</b>

**MEMBERS COUNCIL (2-2nn & 2-8nn)**  
**STATEMENT OF REVENUES & EXPENSES**  
**For the Six Months Ending December 31, 2015**

in thousands US dollars

MONTH OF DEC			Fiscal YTD Through Month of DEC				TWELVE MONTHS ENDING JUNE 30						DRAFT	DRAFT	DRAFT	
Actual FY 14-15	Actual FY 15-16	Budget FY 15-16	Actual FY 14-15	Budget FY 14-15	Actual FY 15-16	Budget FY 15-16	roll up acct / Description	Actual FY 12-13	Actual FY 13-14	Budget FY 14-15	Actual FY 14-15	Forecast FY 15-16	Budget FY 15-16	Budget FY 16-17	Budget FY 17-18	Budget FY 18-19
\$620.8	\$635.2	\$646.8	\$3,597.7	\$3,525.7	\$3,700.9	\$3,750.4	<b>REVENUES</b>									
1.9	4.4	22.5	155.2	192.2	139.4	130.0	31 Membership Dues Earned Income	\$7,077.4	\$7,178.7	\$7,388.0	\$7,281.8	\$7,595.7	\$7,595.7	\$7,828.6	\$8,026.3	\$8,186.8
0.2	0.7		0.3	9.1	7.6		35.1 Meeting & Seminar Income	1,535.2	1,965.7	1,666.3	1,578.5	1,737.5	1,737.5	1,809.8	1,646.5	1,679.4
			10.0	10.0	10.0	10.4	38 Contribution Income	0.5	25.6	18.1	38.4	8.4	8.4	8.7	9.0	9.2
0.4	1.2	4.5	87.5	21.6	56.5	28.2	41.2 Contributions and Matching Gifts	20.0	20.0	20.0	20.0	20.4	20.4	21.0	21.9	22.3
							46 Miscellaneous Income	74.1	103.0	69.9	153.3	83.6	83.6	77.5	72.6	74.1
623.3	641.5	673.8	3,850.7	3,758.6	3,914.4	3,919.0	<b>TOTAL REVENUES</b>	<b>8,707.2</b>	9,293.0	<b>9,162.3</b>	<b>9,072.0</b>	9,445.6	9,445.6	<b>9,745.6</b>	<b>9,776.3</b>	<b>9,971.8</b>
84.3	98.8	101.4	557.9	558.6	648.5	670.9	<b>EXPENSES:</b>									
28.7	27.8	27.7	162.3	156.5	187.8	175.5	51 Salary Expense	1,132.4	1,175.4	1,117.2	1,135.0	1,218.4	1,243.3	1,265.8	1,301.9	1,327.9
12.5	22.3	15.5	121.6	214.1	144.9	124.0	52 Payroll Taxes, Benefits, Personnel Exp	348.3	342.6	312.9	313.7	347.9	328.3	376.8	364.6	371.9
26.1	186.2	60.7	317.3	309.0	426.2	491.4	61 Publishing and Promotion Expense	325.6	339.3	428.3	422.2	404.5	404.5	330.5	343.7	350.6
19.8	13.3	24.1	345.7	380.1	304.6	414.2	64 Meetings & Conferences Expense	1,388.7	1,841.9	1,743.3	1,644.0	1,740.7	1,740.7	1,818.2	1,587.6	1,619.3
6.3	13.4	5.0	22.9	52.3	37.0	43.0	66 Travel Expense	571.7	667.6	760.3	668.7	686.7	731.9	761.8	784.8	800.3
(5.0)		(6.4)	86.8	115.0	109.0	110.8	68 Awards, Certif, Logo Cost of Goods Sold	88.5	76.6	104.6	82.8	108.8	108.8	362.0	116.5	118.8
11.4	12.6	12.4	140.1	204.3	156.2	174.7	71 Research Projects & Grants Expense	99.3	99.4	115.0	93.7	119.6	119.6	123.2	128.2	130.7
14.9	5.5	8.3	38.9	87.6	63.8	47.9	82 Office Expense and Organizational Dues	317.4	330.0	408.5	299.4	359.4	359.4	370.3	386.0	393.7
18.0	19.6	20.4	125.9	87.5	134.6	128.7	84 Outside Services Expense	169.2	178.1	175.3	175.2	178.4	178.4	352.9	190.2	194.0
(39.1)	(183.7)		(142.7)		(289.5)		88 Other Expense	237.6	259.2	258.3	294.1	246.1	246.1	267.8	272.6	278.1
125.0	129.4	154.0	773.3	810.3	806.5	953.2	88.1 Prepaid Expense (contra acct)		2.0		13.5					
							91 Allocation of Overhead & BOD	1,428.0	1,603.9	1,620.5	1,657.9	1,860.3	1,829.6	1,833.9	1,813.3	1,849.6
302.9	345.2	423.1	2,550.0	2,975.3	2,729.6	3,334.3	<b>TOTAL EXPENSES</b>	<b>6,106.7</b>	6,916.0	<b>7,044.2</b>	<b>6,800.2</b>	7,270.8	7,290.6	<b>7,863.2</b>	<b>7,289.4</b>	<b>7,434.9</b>
320.4	296.3	250.7	1,300.7	783.3	1,184.8	584.7	<b>SURPLUS (DEFICIT) before reserve income</b>	<b>2,600.5</b>	2,377.0	<b>2,118.1</b>	<b>2,271.8</b>	2,174.8	2,155.0	<b>1,882.4</b>	<b>2,486.9</b>	<b>2,536.9</b>
320.4	296.3	250.7	1,300.7	783.3	1,184.8	584.7	<b>OVERALL SURPLUS (DEFICIT) after reserve income</b>	<b>2,600.5</b>	2,377.0	<b>2,118.1</b>	<b>2,271.8</b>	2,174.8	2,155.0	<b>1,882.4</b>	<b>2,486.9</b>	<b>2,536.9</b>

**PUBLISHING & EDUCATION COUNCIL (2-4nn & 5-5nn)**  
**STATEMENT OF REVENUES & EXPENSES**  
**For the Six Months Ending December 31, 2015**

in thousands US dollars

MONTH OF DEC			Fiscal YTD Through Month of DEC				TWELVE MONTHS ENDING JUNE 30						DRAFT	DRAFT	DRAFT	
Actual	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Actual	Budget	Actual	Forecast	Budget	Budget	Budget	Budget	
FY 14-15	FY 15-16	FY 15-16	FY 14-15	FY 14-15	FY 15-16	FY 15-16	FY 12-13	FY 13-14	FY 14-15	FY 14-15	FY 15-16	FY 15-16	FY 16-17	FY 17-18	FY 18-19	
							roll up									
							acct / Description									
\$230.0	\$221.9	\$271.9	\$1,597.4	\$1,948.3	\$1,652.9	\$1,750.0	<b>REVENUES</b>									
360.7	361.2	357.7	1,597.2	1,773.8	1,764.6	1,645.4	32 Publication Sales Income	\$3,323.4	\$3,803.6	\$3,896.5	\$3,483.9	\$3,781.4	\$3,585.5	\$3,840.5	\$4,028.4	\$4,106.6
3.0	2.6	2.4	14.2	8.4	10.3	11.1	34 Advertising Income - Display	3,856.1	3,773.1	3,897.0	3,710.8	3,862.1	3,761.0	3,816.0	3,957.8	4,035.6
36.8	49.5	41.4	297.2	310.0	322.2	325.4	34 Advertising Income - Classified	19.3	26.5	16.9	32.0	25.0	25.0	25.0	25.0	25.5
27.7	27.7	33.2	96.0	80.0	88.8	115.2	34 Advertising Income - On-line	525.4	470.4	620.0	595.6	660.0	640.0	650.0	702.0	716.0
20.3	45.3	23.1	636.5	725.2	681.8	647.9	35.2 Certification Registration	138.7	148.5	160.0	183.3	195.0	220.0	295.0	350.0	400.0
							35.3 Education Registration	1,011.3	1,301.6	1,450.4	1,504.5	1,560.0	1,585.0	1,700.0	1,853.0	1,892.1
							37 Special Project Income			45.0	230.0					
0.5	0.1	0.5	3.0	6.7	3.6	3.2	38 Contribution Income	15.8	17.0	13.4	10.8	13.9	13.9	14.3	14.9	15.2
							41.2 Contributions and Matching Gifts	50.0	110.0	95.0	95.0	97.0	97.0	98.6	102.5	104.6
4.7	9.0	7.2	35.0	109.0	46.6	55.9	46 Miscellaneous Income	185.9	195.3	218.1	143.1	165.2	155.2	166.8	173.7	176.9
683.7	717.3	737.4	4,276.5	5,051.4	4,570.8	4,554.1	<b>TOTAL REVENUES</b>	<b>9,125.9</b>	<b>9,891.0</b>	<b>10,597.3</b>	<b>9,989.0</b>	<b>10,359.6</b>	<b>10,082.6</b>	<b>10,606.2</b>	<b>11,207.3</b>	<b>11,472.5</b>
170.7	177.9	199.2	1,091.7	1,148.6	1,189.1	1,275.4	<b>EXPENSES:</b>									
67.3	63.9	60.3	338.7	342.6	379.4	349.3	51 Salary Expense	2,157.9	2,232.8	2,297.2	2,218.4	2,348.7	2,364.0	2,434.9	2,532.3	2,583.0
258.6	354.4	244.3	1,281.5	1,558.9	1,544.5	1,275.6	52 Payroll Taxes, Benefits, Personnel Exp	673.8	717.3	685.3	706.0	713.9	673.2	781.4	767.1	782.3
1.6	6.9	23.1	163.1	168.0	181.9	170.3	61 Publishing and Promotion Expense	3,229.1	3,105.4	3,117.8	3,302.7	3,278.9	3,133.0	3,193.1	3,292.4	3,360.2
6.8	11.9	11.1	63.0	107.3	33.9	73.9	64 Meetings & Conferences Expense	320.1	354.7	349.3	451.6	446.8	426.8	440.0	455.2	464.3
		0.2	0.5	1.2	(0.3)	1.2	66 Travel Expense	170.6	196.9	214.6	178.4	187.1	187.1	230.7	231.7	235.7
							68 Awards, Certif, Logo Cost of Goods Sold	1.3	0.8	2.4	1.0	2.5	2.5	2.6	2.7	2.7
2.6	2.2	3.1	16.2	19.3	26.7	21.4	76 Public Relations Expense	8.5								
86.3	106.6	70.7	384.5	495.4	425.5	372.6	78 Occupancy & Insurance	36.7	36.3	38.5	36.1	40.1	40.1	41.3	42.9	43.8
72.1	87.7	114.1	283.9	453.3	339.8	506.0	82 Office Expense and Organizational Dues	909.3	894.2	990.7	963.5	1,027.5	969.4	1,017.9	1,054.7	1,075.2
88.5	39.0	64.4	27.1	69.1	160.4	39.3	84 Outside Services Expense	718.0	744.5	906.6	817.2	1,109.3	1,054.3	1,407.3	1,149.8	1,108.8
4.8			28.9	20.3			88 Other Expense	122.6	143.7	138.1	108.1	179.8	162.5	157.9	164.3	168.2
253.1	236.7	302.7	1,518.8	1,666.1	1,481.1	1,819.4	90 Depreciation Expense	61.0	61.0	40.6	45.8					
							91 Allocation of Overhead & BOD	2,722.7	3,048.4	3,332.1	3,237.1	3,537.3	3,478.9	3,531.4	3,841.5	3,918.3
1,012.4	1,087.2	1,093.2	5,197.9	6,050.1	5,762.0	5,904.4	<b>TOTAL EXPENSES</b>	<b>11,131.6</b>	<b>11,536.0</b>	<b>12,113.2</b>	<b>12,065.9</b>	<b>12,871.9</b>	<b>12,491.8</b>	<b>13,238.5</b>	<b>13,534.6</b>	<b>13,742.5</b>
(328.7)	(369.9)	(355.8)	(921.4)	(998.7)	(1,191.2)	(1,350.3)	<b>SURPLUS (DEFICIT) before reserve income</b>	<b>(2,005.7)</b>	<b>(1,645.0)</b>	<b>(1,515.9)</b>	<b>(2,076.9)</b>	<b>(2,512.3)</b>	<b>(2,409.2)</b>	<b>(2,632.3)</b>	<b>(2,327.3)</b>	<b>(2,270.0)</b>
(328.7)	(369.9)	(355.8)	(921.4)	(998.7)	(1,191.2)	(1,350.3)	<b>OVERALL SURPLUS (DEFICIT) after reserve income</b>	<b>(2,005.7)</b>	<b>(1,645.0)</b>	<b>(1,515.9)</b>	<b>(2,076.9)</b>	<b>(2,512.3)</b>	<b>(2,409.2)</b>	<b>(2,632.3)</b>	<b>(2,327.3)</b>	<b>(2,270.0)</b>

**TECHNOLOGY COUNCIL  
STATEMENT OF REVENUES & EXPENSES  
For the Six Months Ending December 31, 2015**

in thousands US dollars

MONTH OF DEC			Fiscal YTD Through Month of DEC				TWELVE MONTHS ENDING JUNE 30						DRAFT	DRAFT	DRAFT	
Actual FY 14-15	Actual FY 15-16	Budget FY 15-16	Actual FY 14-15	Budget FY 14-15	Actual FY 15-16	Budget FY 15-16	roll up acct / Description	Actual FY 12-13	Actual FY 13-14	Budget FY 14-15	Actual FY 14-15	Forecast FY 15-16	Budget FY 15-16	Budget FY 16-17	Budget FY 17-18	Budget FY 18-19
	1.0	1.0	\$21.8 7.2		\$3.2 6.0		<b>REVENUES</b>									
	1.0	1.0	29.0	12.1	9.2	19.5	37 Special Project Income	\$60.9	\$5.0	\$10.0	\$86.6					
							46 Miscellaneous Income	6.4	17.0	24.3	12.2	25.3	25.3	26.0	27.1	27.6
							<b>TOTAL REVENUES</b>	<b>67.3</b>	<b>22.0</b>	<b>34.3</b>	<b>98.8</b>	<b>25.3</b>	<b>25.3</b>	<b>26.0</b>	<b>27.1</b>	<b>27.6</b>
							<b>EXPENSES:</b>									
84.1	85.8	93.2	543.3	541.0	565.6	599.8	51 Salary Expense	1,059.0	1,060.1	1,082.1	1,108.7	1,056.1	1,123.5	1,157.2	1,203.4	1,227.5
25.0	24.2	25.6	154.2	151.5	164.5	156.8	52 Payroll Taxes, Benefits, Personnel Exp	310.8	296.7	303.0	322.2	314.4	296.6	347.9	329.0	335.5
0.6	0.2	0.9	0.3	1.1	(0.3)	0.7	61 Publishing and Promotion Expense	0.5	5.5	2.1	0.8	2.2	2.2	2.3	2.4	2.4
1.2	0.7	0.8	3.5	11.9	2.0	12.7	64 Meetings & Conferences Expense	10.9	11.3	25.4	8.2	19.8	19.8	20.2	20.6	21.0
7.3	4.5	9.0	53.8	112.4	16.9	72.1	66 Travel Expense	146.0	163.2	226.7	132.5	190.4	147.4	170.1	175.6	178.8
				0.8			68 Awards, Certif, Logo Cost of Goods Sold	0.4	0.4	1.5	0.3	1.6	1.6	1.6	1.7	1.7
			9.2	6.1	50.0	55.0	73 Special Projects Expense	7.8	50.0	160.0	72.5	110.0	110.0			
			0.2	1.2		1.2	76 Public Relations Expense			2.3		2.4	2.4	2.5	2.6	2.6
0.1	0.1	1.6	2.7	50.4	87.4	10.8	82 Office Expense and Organizational Dues	88.8	109.0	100.8	90.1	109.5	109.5	113.3	118.8	121.2
	2.9	4.3	1.3	29.2	34.8	28.1	84 Outside Services Expense	21.1	57.5	58.4	2.8	53.7	53.7	55.3	57.4	58.6
						0.1	88 Other Expense	66.8		0.1		0.1	0.1	0.1	0.1	0.1
			20.3	(32.4)			88.1 Prepaid Expense (contra acct)		(20.3)	(64.9)	20.3					
2.2	2.3		13.5	10.0	13.5		90 Depreciation Expense	27.0	27.0	20.0	27.0					
124.7	112.3	141.3	758.0	784.8	704.0	855.7	91 Allocation of Overhead & BOD	1,339.4	1,442.7	1,569.6	1,621.0	1,681.0	1,653.2	1,676.4	1,704.7	1,738.8
245.2	233.0	286.1	1,557.0	1,661.9	1,638.4	1,793.0	<b>TOTAL EXPENSES</b>	<b>3,078.5</b>	<b>3,203.1</b>	<b>3,487.1</b>	<b>3,406.4</b>	<b>3,541.2</b>	<b>3,520.0</b>	<b>3,546.9</b>	<b>3,616.3</b>	<b>3,688.2</b>
(245.2)	(232.0)	(285.1)	(1,528.0)	(1,649.8)	(1,629.2)	(1,773.5)	<b>SURPLUS (DEFICIT) before reserve income</b>	<b>(3,011.2)</b>	<b>(3,181.1)</b>	<b>(3,452.8)</b>	<b>(3,307.6)</b>	<b>(3,515.9)</b>	<b>(3,494.7)</b>	<b>(3,520.9)</b>	<b>(3,589.2)</b>	<b>(3,660.6)</b>
55.4	47.9	60.6	192.2	150.0	203.5	210.5	92 Non-recurring Expenses	1,158.8	474.8	300.0	478.3	500.0	500.0			
(300.6)	(279.9)	(345.7)	(1,720.2)	(1,799.8)	(1,832.7)	(1,984.0)	<b>OVERALL SURPLUS (DEFICIT) after reserve income</b>	<b>(4,170.0)</b>	<b>(3,655.9)</b>	<b>(3,752.8)</b>	<b>(3,785.9)</b>	<b>(4,015.9)</b>	<b>(3,994.7)</b>	<b>(3,520.9)</b>	<b>(3,589.2)</b>	<b>(3,660.6)</b>



**COLLEGE OF FELLOWS 6-590**  
**STATEMENT OF REVENUES & EXPENSES**  
For the Six Months Ending December 31, 2015

in thousands US dollars

MONTH OF DEC		Fiscal YTD Through Month of DEC				TWELVE MONTHS ENDING JUNE 30						DRAFT	DRAFT	DRAFT	
Actual FY 14-15	Actual FY 15-16	Budget FY 15-16	Actual FY 14-15	Budget FY 14-15	Actual FY 15-16	Budget FY 15-16	Actual FY 12-13	Actual FY 13-14	Budget FY 14-15	Actual FY 14-15	Forecast FY 15-16	Budget FY 15-16	Budget FY 16-17	Budget FY 17-18	Budget FY 18-19
\$1.1	\$0.2		\$1.1		\$0.2					\$5.7					
1.1	0.2		1.1		0.2					5.7					
	(0.4)														
	(0.2)									2.8					
										0.1					
	(0.6)									2.9					
1.1	0.8		1.1		0.2					2.8					
			14.8							14.8					
1.1	0.8		15.9		0.2					17.6					

roll up  
acct / Description

**REVENUES**

38 Contribution Income

**TOTAL REVENUES**

**EXPENSES:**

51 Salary Expense

52 Payroll Taxes, Benefits, Personnel Exp

66 Travel Expense

88 Other Expense

**TOTAL EXPENSES**

SURPLUS (DEFICIT) before reserve income

91.7 Gain on Merger

**OVERALL SURPLUS (DEFICIT) after reserve income**



**GENERAL (Fund 2)  
STATEMENT OF REVENUES & EXPENSES  
MAJOR VARIATIONS  
For the Six Months Ending December 31, 2015**

in thousands US dollars

MONTH OF DEC		Fiscal YTD Through Month of DEC				TWELVE MONTHS ENDING JUNE 30						Variance	Comments					
Actual FY 14-15	Actual FY 15-16	Budget FY 15-16	Actual FY 14-15	Budget FY 14-15	Actual FY 15-16	Budget FY 15-16	Actual FY 12-13	Actual FY 13-14	Budget FY 14-15	Actual FY 14-15	Forecast FY 15-16	Budget FY 15-16		Budget vs. Forecast 15-16				
\$620.8	\$635.2	\$646.8	\$3,597.7	\$3,525.7	\$3,700.9	\$3,750.4												
<b>REVENUES</b>																		
230.0	221.9	271.9	1,597.4	1,948.3	1,652.9	1,750.0	31	Membership Dues Earned Income	\$7,077.4	\$7,178.7	\$7,388.0	\$7,281.8	\$7,595.7	\$7,595.7	-			
360.7	361.2	357.7	1,597.2	1,773.8	1,764.6	1,645.4	32	Publication Sales Income	3,323.4	3,803.6	3,896.5	3,483.9	3,781.4	3,585.5	195.9	Standards sales; new titles; increased digital delivery demand		
3.0	2.6	2.4	14.2	8.4	10.3	11.1	34	Advertising Income - Display	3,856.1	3,773.1	3,897.0	3,710.8	3,862.1	3,761.0	101.1	Very strong market share position; print/digital packages		
36.8	49.5	41.4	297.2	310.0	322.2	325.4	34	Advertising Income - Classified	19.3	26.5	16.9	32.0	25.0	25.0	-			
1.9	4.4	22.5	155.2	192.2	139.4	130.0	34	Advertising Income - On-line	525.4	470.4	620.0	595.6	660.0	640.0	20.0	Webinars packages meet advertising trend		
27.7	27.7	33.2	96.0	80.0	88.8	115.2	35.1	Meeting & Seminar Income	1,535.2	1,965.7	1,666.3	1,578.5	1,737.5	1,737.5	-			
20.3	45.3	23.1	636.5	725.2	681.8	647.9	35.2	Certification Registration	138.7	148.5	160.0	183.3	195.0	220.0	(25.0)	Demand for high level understanding not yet created		
0.9	0.9	0.6	21.8	90.0	3.2	6.3	35.3	Education Registration	1,011.3	1,301.6	1,450.4	1,504.5	1,560.0	1,585.0	(25.0)	Performance shows steady year over year growth; aggressive budget		
		(4.8)	12.3	19.8	11.2	6.3	37	Special Project Income	60.9	50.0	240.0	316.6			-			
			10.0	10.0	10.0	(18.6)	38	Contribution Income	31.3	47.2	39.5	72.7	30.4	30.4	-			
			145.9	60.0	34.0	60.0	41.1	AHR Exposition Income	3,949.9	3,973.0	4,857.9	5,146.6	4,757.6	4,757.6	-			
26.2	33.2	36.2	157.2	157.2	199.2	217.3	41.2	Contributions and Matching Gifts	(1,940.9)	(1,859.2)	(1,699.5)	(1,699.5)	(1,839.0)	(1,839.0)	-			
27.4	6.7	13.6	242.0	192.1	99.3	121.5	41.3	Exposition Income - Other Countries	116.3		60.0	145.9	34.0	60.0	(26.0)	AHR Mexico income was less than budgeted.		
1,355.7	1,388.6	1,444.6	8,580.6	9,092.7	8,717.8	8,761.9	44	Reserve Transfers	510.9	489.2	314.5	314.5	398.4	398.4	-			
							46	Miscellaneous Income	286.4	341.9	410.9	534.4	305.9	295.9	10.0			
							<b>TOTAL REVENUES</b>	<b>20,501.6</b>	<b>21,710.2</b>	<b>23,318.4</b>	<b>23,201.6</b>	<b>23,104.0</b>	<b>22,853.0</b>					
<b>EXPENSES:</b>																		
547.1	614.3	623.6	3,573.9	3,676.8	4,022.4	4,126.8	51	Salary Expense	6,814.3	6,988.0	7,353.7	7,357.2	7,807.2	7,832.3	(25.1)	Open positions		
183.0	192.6	179.7	1,127.7	1,068.3	1,219.1	1,161.7	52	Payroll Taxes, Benefits, Personnel Exp	2,070.3	2,105.2	2,136.6	2,344.1	2,365.4	2,241.5	123.9	Due primarily to higher than budgeted health insurance costs		
272.2	378.2	266.5	1,408.7	1,841.6	1,697.5	1,451.8	61	Publishing and Promotion Expense	3,596.3	3,524.7	3,683.1	3,757.5	3,834.8	3,673.9	160.9	Higher primarily because of advertising commissions and increased product sales		
35.1	202.8	91.6	510.7	499.2	637.7	706.6	64	Meetings & Conferences Expense	1,778.3	2,286.6	2,189.6	2,178.5	2,282.2	2,262.2	20.0	Higher for increased education activity		
65.2	87.1	92.6	806.4	1,130.9	645.3	1,054.6	66	Travel Expense	1,634.3	2,138.0	2,263.8	1,954.6	2,187.9	2,190.1	(2.2)			
6.3	13.8	5.3	28.0	56.0	37.7	45.0	68	Awards, Certif, Logo Cost of Goods Sold	99.4	86.9	112.0	98.9	116.5	116.5	-			
(5.0)		(6.4)	86.8	115.0	109.0	110.8	71	Research Projects & Grants Expense	106.3	106.5	122.6	100.9	127.5	127.5	-			
		9.2	6.1		50.0	55.0	73	Special Projects Expense	7.8	50.0	160.0	72.5	110.0	110.0	-			
6.3		6.1	25.2	29.8	46.8	25.4	76	Public Relations Expense	70.3	129.1	59.7	51.0	62.0	62.0	-			
53.2	51.8	58.2	285.4	274.9	307.8	319.1	78	Occupancy & Insurance	501.5	563.4	549.8	559.2	575.9	575.9	-			
166.6	151.6	118.3	766.6	937.0	877.1	771.2	82	Office Expense and Organizational Dues	1,668.6	1,704.0	1,873.9	1,788.1	1,893.5	1,835.4	58.1	Increased postage to improve success of intl delivery		
162.0	126.9	197.5	678.4	907.2	727.5	986.7	84	Outside Services Expense	1,430.1	1,528.0	1,814.3	1,654.6	2,035.0	1,980.0	55.0	Commission paid on online bookstore purchases increases with greater sales		
118.1	76.3	94.7	200.7	191.8	348.9	214.3	88	Other Expense	493.0	496.8	468.4	487.8	508.7	491.4	17.3	Higher credit card expenses due to increased sales.		
(39.1)	(225.1)	8.3	(122.4)	(32.4)	(532.2)	50.0	88.1	Prepaid Expense (contra acct)		(18.3)	(64.9)	33.8			-			
51.4	50.6	49.5	304.5	307.1	292.8	292.7	89	Opportunity Fund		35.0	100.0	35.5	100.0	100.0	-			
(61.5)	(55.8)	(68.1)	(382.1)	(396.0)	(357.4)	(438.9)	90	Depreciation Expense	695.6	660.9	614.2	631.9	543.5	543.5	-			
1,560.9	1,665.1	1,726.6	9,304.6	10,607.2	10,130.0	10,932.8	91	Allocation of Overhead & BOD	(649.4)	(730.0)	(792.0)	(808.5)	(854.0)	(840.0)	(14.0)			
							<b>TOTAL EXPENSES</b>	<b>20,316.7</b>	<b>21,654.8</b>	<b>22,644.8</b>	<b>22,297.6</b>	<b>23,696.1</b>	<b>23,302.2</b>					
(205.2)	(276.5)	(282.0)	(724.0)	(1,514.5)	(1,412.2)	(2,170.9)	<b>SURPLUS (DEFICIT) before reserve income</b>						184.9	55.4	673.6	904.0	(592.1)	(449.2)
62.0	75.2	60.6	210.2	150.0	302.0	210.5	91.5	Headquarters Building Renewal Contributions		0.3								
(35.3)	(234.3)	155.1	(40.3)	359.5	(460.2)	370.9	92	Non-recurring Expenses	1,244.8	488.9	300.0	670.7	590.0	590.0				
(26.2)	(33.2)	(36.2)	(157.2)	(259.0)	(199.2)	(217.3)	<b>Reserve Investment Income:</b>						1,277.1	1,778.1	719.0	146.5	339.6	603.0
							95	Investmt Income - Reserves (net of exp)	(510.9)	(489.2)	(518.1)	(314.5)	(398.4)	(398.4)				
(61.5)	(267.5)	118.9	(197.5)	100.5	(659.4)	153.6	96	Transfer Reserves Portion Used Currently										
(328.7)	(619.2)	(223.7)	(1,131.7)	(1,564.0)	(2,373.6)	(2,227.8)	<b>Remaining Reserve Investment Income</b>						766.2	1,288.9	200.9	(168.0)	(58.8)	204.6
							<b>OVERALL SURPLUS (DEFICIT) after reserve income</b>						(293.7)	855.7	574.5	65.3	(1,240.9)	(834.6)

**BOARD OF DIRECTORS 2-5nn**  
**STATEMENT OF REVENUES & EXPENSES**  
**MAJOR VARIATIONS**  
**For the Six Months Ending December 31, 2015**

in thousands US dollars

MONTH OF DEC			Fiscal YTD Through Month of DEC				TWELVE MONTHS ENDING JUNE 30						Variance Budget vs. Forecast 15-16	Comments	
Actual FY 14-15	Actual FY 15-16	Budget FY 15-16	Actual FY 14-15	Budget FY 14-15	Actual FY 15-16	Budget FY 15-16	Actual FY 12-13	Actual FY 13-14	Budget FY 14-15	Actual FY 14-15	Forecast FY 15-16	Budget FY 15-16			
\$0.3		\$0.1 (4.8)	\$9.0	\$4.0		\$3.1 (29.0)									
26.0			117.0	20.0	0.3										
26.3		(4.7)	126.0	24.0	0.3	(25.9)									
79.2	88.4	77.9	539.3	434.3	583.1	592.9	771.5	735.7	868.6	1,032.7	1,039.3	1,039.3	-		
23.6	27.4	21.2	153.1	121.6	171.5	155.5	224.1	214.4	243.2	287.0	286.7	274.4	12.3		
	0.8	5.4	2.5	48.7	4.9	49.2	32.8	69.4	97.5	10.0	107.3	107.3	-		
5.7	8.4	6.0	22.4	3.9	22.4	23.5	39.0	71.0	58.8	64.0	61.6	61.6	-		
29.8	56.6	45.9	296.1	489.3	237.0	444.5	650.8	1,017.9	978.6	887.9	1,036.8	1,036.8	-	\$120K of Strategic Plan Initiatives 1 and 2 in Budget has not been utilized in first six months of FY15-16.	
	0.4	0.1	4.7	1.8	1.1	0.8	9.2	9.1	3.5	14.9	3.7	3.7	-		
							7.0	7.1	7.5	7.2	7.8	7.8	-		
7.4	2.6	4.2	35.0	17.5	18.6	24.5							-		
							42.2	42.6	35.1	60.5	44.8	44.8	-		
20.6	1.9	20.6	83.9	68.4	36.7	135.2	92.4	69.2	136.9	204.6	191.6	191.6	-	\$75K of Strategic Plan Initiative 5 in Budget has not been utilized in first six months of FY15-16.	
		0.9		0.6		5.3	5.3	0.5	2.5	1.9	10.6	10.6	-		
	(41.3)				(242.7)								-		
		8.3				50.0		35.0	100.0	35.5	100.0	100.0	-		
0.3			2.0	1.5	0.2		4.1	4.1	3.1	3.2			-		
(166.7)	(145.3)	(211.3)	(1,138.8)	(1,267.7)	(832.7)	(1,443.6)	(1,878.5)	(2,277.4)	(2,535.3)	(2,584.6)	(2,877.9)	(2,877.9)	-		
(0.1)	(0.1)	(20.8)	0.2	(80.1)	0.1	37.8	(0.1)	(0.2)		24.9	12.3				
26.4	0.1	16.1	125.8	104.1	0.2	(63.7)	18.0	7.2	48.0	271.6	(62.3)	(50.0)			
26.4	0.1	16.1	125.8	104.1	0.2	(63.7)	18.0	7.2	48.0	271.6	(62.3)	(50.0)			



**MEMBERS COUNCIL (2-2nn & 2-8nn)**  
**STATEMENT OF REVENUES & EXPENSES**  
**MAJOR VARIATIONS**  
For the Six Months Ending December 31, 2015

in thousands US dollars

MONTH OF DEC			Fiscal YTD Through Month of DEC				roll up acct / Description	TWELVE MONTHS ENDING JUNE 30						Variance Budget vs. Forecast 15-16	Comments
Actual FY 14-15	Actual FY 15-16	Budget FY 15-16	Actual FY 14-15	Budget FY 14-15	Actual FY 15-16	Budget FY 15-16		Actual FY 12-13	Actual FY 13-14	Budget FY 14-15	Actual FY 14-15	Forecast FY 15-16	Budget FY 15-16		
\$620.8	\$635.2	\$646.8	\$3,597.7	\$3,525.7	\$3,700.9	\$3,750.4	<b>REVENUES</b>								
1.9	4.4	22.5	155.2	192.2	139.4	130.0	31 Membership Dues Earned Income	\$7,077.4	\$7,178.7	\$7,388.0	\$7,281.8	\$7,595.7	\$7,595.7	-	
0.2	0.7		0.3	9.1	7.6		35.1 Meeting & Seminar Income	1,535.2	1,965.7	1,666.3	1,578.5	1,737.5	1,737.5	-	
			10.0	10.0	10.0	10.4	38 Contribution Income	0.5	25.6	18.1	38.4	8.4	8.4	-	
0.4	1.2	4.5	87.5	21.6	56.5	28.2	41.2 Contributions and Matching Gifts	20.0	20.0	20.0	20.0	20.4	20.4	-	
							46 Miscellaneous Income	74.1	103.0	69.9	153.3	83.6	83.6	-	
623.3	641.5	673.8	3,850.7	3,758.6	3,914.4	3,919.0	<b>TOTAL REVENUES</b>	<b>8,707.2</b>	<b>9,293.0</b>	<b>9,162.3</b>	<b>9,072.0</b>	<b>9,445.6</b>	<b>9,445.6</b>		
							<b>EXPENSES:</b>								
84.3	98.8	101.4	557.9	558.6	648.5	670.9	51 Salary Expense	1,132.4	1,175.4	1,117.2	1,135.0	1,218.4	1,243.3	-	Open positions for several months are
28.7	27.8	27.7	162.3	156.5	187.8	175.5	52 Payroll Taxes, Benefits, Personnel Exp	348.3	342.6	312.9	313.7	347.9	328.3	19.6	( 24.9 ) now filled.
12.5	22.3	15.5	121.6	214.1	144.9	124.0	61 Publishing and Promotion Expense	325.6	339.3	428.3	422.2	404.5	404.5	-	
26.1	186.2	60.7	317.3	309.0	426.2	491.4	64 Meetings & Conferences Expense	1,388.7	1,841.9	1,743.3	1,644.0	1,740.7	1,740.7	-	
19.8	13.3	24.1	345.7	380.1	304.6	414.2	66 Travel Expense	571.7	667.6	760.3	668.7	686.7	731.9	-	Travel expenses lower than anticipated
6.3	13.4	5.0	22.9	52.3	37.0	43.0	68 Awards, Certif, Logo Cost of Goods Sold	88.5	76.6	104.6	82.8	108.8	108.8	-	( 45.2 ) in first six months.
(5.0)		(6.4)	86.8	115.0	109.0	110.8	71 Research Projects & Grants Expense	99.3	99.4	115.0	93.7	119.6	119.6	-	
11.4	12.6	12.4	140.1	204.3	156.2	174.7	82 Office Expense and Organizational Dues	317.4	330.0	408.5	299.4	359.4	359.4	-	
14.9	5.5	8.3	38.9	87.6	63.8	47.9	84 Outside Services Expense	169.2	178.1	175.3	175.2	178.4	178.4	-	
18.0	19.6	20.4	125.9	87.5	134.6	128.7	88 Other Expense	237.6	259.2	258.3	294.1	246.1	246.1	-	
(39.1)	(183.7)		(142.7)		(289.5)		88.1 Prepaid Expense (contra acct)		2.0		13.5			-	
125.0	129.4	154.0	773.3	810.3	806.5	953.2	91 Allocation of Overhead & BOD	1,428.0	1,603.9	1,620.5	1,657.9	1,860.3	1,829.6	30.7	
302.9	345.2	423.1	2,550.0	2,975.3	2,729.6	3,334.3	<b>TOTAL EXPENSES</b>	<b>6,106.7</b>	<b>6,916.0</b>	<b>7,044.2</b>	<b>6,800.2</b>	<b>7,270.8</b>	<b>7,290.6</b>		
320.4	296.3	250.7	1,300.7	783.3	1,184.8	584.7	<b>SURPLUS (DEFICIT) before reserve income</b>	<b>2,600.5</b>	<b>2,377.0</b>	<b>2,118.1</b>	<b>2,271.8</b>	<b>2,174.8</b>	<b>2,155.0</b>		
320.4	296.3	250.7	1,300.7	783.3	1,184.8	584.7	<b>OVERALL SURPLUS (DEFICIT) after reserve income</b>	<b>2,600.5</b>	<b>2,377.0</b>	<b>2,118.1</b>	<b>2,271.8</b>	<b>2,174.8</b>	<b>2,155.0</b>		

**PUBLISHING & EDUCATION COUNCIL (2-4nn & 5-5nn)**  
**STATEMENT OF REVENUES & EXPENSES**  
**MAJOR VARIATIONS**  
**For the Six Months Ending December 31, 2015**

in thousands US dollars

MONTH OF DEC		Fiscal YTD Through Month of DEC				TWELVE MONTHS ENDING JUNE 30						Variance	Comments		
Actual FY 14-15	Actual FY 15-16	Budget FY 15-16	Actual FY 14-15	Budget FY 14-15	Actual FY 15-16	Budget FY 15-16	roll up acct / Description	Actual FY 12-13	Actual FY 13-14	Budget FY 14-15	Actual FY 14-15	Forecast FY 15-16		Budget FY 15-16	Budget vs. Forecast 15-16
<b>REVENUES</b>															
\$230.0	\$221.9	\$271.9	\$1,597.4	\$1,948.3	\$1,652.9	\$1,750.0	32 Publication Sales Income	\$3,323.4	\$3,803.6	\$3,896.5	\$3,483.9	\$3,781.4	\$3,585.5	195.9	Standards sales; new titles; increased digital delivery demand
360.7	361.2	357.7	1,597.2	1,773.8	1,764.6	1,645.4	34 Advertising Income - Display	3,856.1	3,773.1	3,897.0	3,710.8	3,862.1	3,761.0	101.1	Very strong market share position;
3.0	2.6	2.4	14.2	8.4	10.3	11.1	34 Advertising Income - Classified	19.3	26.5	16.9	32.0	25.0	25.0	-	print/digital packages
36.8	49.5	41.4	297.2	310.0	322.2	325.4	34 Advertising Income - On-line	525.4	470.4	620.0	595.6	660.0	640.0	20.0	Webinars packages meet advertising trends
27.7	27.7	33.2	96.0	80.0	88.8	115.2	35.2 Certification Registration	138.7	148.5	160.0	183.3	195.0	220.0	(25.0)	Demand for high level understanding not yet created
20.3	45.3	23.1	636.5	725.2	681.8	647.9	35.3 Education Registration	1,011.3	1,301.6	1,450.4	1,504.5	1,560.0	1,585.0	(25.0)	Performance shows steady year over year growth; aggressive budget
0.5	0.1	0.5	3.0	6.7	3.6	3.2	37 Special Project Income		45.0	230.0	230.0			-	
4.7	9.0	7.2	35.0	109.0	46.6	55.9	38 Contribution Income	15.8	17.0	13.4	10.8	13.9	13.9	-	
							41.2 Contributions and Matching Gifts	50.0	110.0	95.0	95.0	97.0	97.0	-	
							46 Miscellaneous Income	185.9	195.3	218.1	143.1	165.2	155.2	10.0	
683.7	717.3	737.4	4,276.5	5,051.4	4,570.8	4,554.1	<b>TOTAL REVENUES</b>	<b>9,125.9</b>	<b>9,891.0</b>	<b>10,597.3</b>	<b>9,989.0</b>	<b>10,359.6</b>	<b>10,082.6</b>		
<b>EXPENSES:</b>															
170.7	177.9	199.2	1,091.7	1,148.6	1,189.1	1,275.4	51 Salary Expense	2,157.9	2,232.8	2,297.2	2,218.4	2,348.7	2,364.0	(15.3)	
67.3	63.9	60.3	338.7	342.6	379.4	349.3	52 Payroll Taxes, Benefits, Personnel Exp	673.8	717.3	685.3	706.0	713.9	673.2	40.7	
258.6	354.4	244.3	1,281.5	1,558.9	1,544.5	1,275.6	61 Publishing and Promotion Expense	3,229.1	3,105.4	3,117.8	3,302.7	3,278.9	3,133.0	145.9	Higher because of advertising commissions and increased product sales
1.6	6.9	23.1	163.1	168.0	181.9	170.3	64 Meetings & Conferences Expense	320.1	354.7	349.3	451.6	446.8	426.8	20.0	Higher for increased education activity
6.8	11.9	11.1	63.0	107.3	33.9	73.9	66 Travel Expense	170.6	196.9	214.6	178.4	187.1	187.1	-	
		0.2	0.5	1.2	(0.3)	1.2	68 Awards, Certif, Logo Cost of Goods Sold	1.3	0.8	2.4	1.0	2.5	2.5	-	
2.6	2.2	3.1	16.2	19.3	26.7	21.4	76 Public Relations Expense	8.5						-	
							78 Occupancy & Insurance	36.7	36.3	38.5	36.1	40.1	40.1	-	
86.3	106.6	70.7	384.5	495.4	425.5	372.6	82 Office Expense and Organizational Dues	909.3	894.2	990.7	963.5	1,027.5	969.4	58.1	Increased postage to improve success of intl delivery
72.1	87.7	114.1	283.9	453.3	339.8	506.0	84 Outside Services Expense	718.0	744.5	906.6	817.2	1,109.3	1,054.3	55.0	Commission paid on online bookstore purchases increases with greater sales
88.5	39.0	64.4	27.1	69.1	160.4	39.3	88 Other Expense	122.6	143.7	138.1	108.1	179.8	162.5	17.3	Higher credit card expenses due to increased sales.
4.8			28.9	20.3			90 Depreciation Expense	61.0	61.0	40.6	45.8			-	
253.1	236.7	302.7	1,518.8	1,666.1	1,481.1	1,819.4	91 Allocation of Overhead & BOD	2,722.7	3,048.4	3,332.1	3,237.1	3,537.3	3,478.9	58.4	
1,012.4	1,087.2	1,093.2	5,197.9	6,050.1	5,762.0	5,904.4	<b>TOTAL EXPENSES</b>	<b>11,131.6</b>	<b>11,536.0</b>	<b>12,113.2</b>	<b>12,065.9</b>	<b>12,871.9</b>	<b>12,491.8</b>		
(328.7)	(369.9)	(355.8)	(921.4)	(998.7)	(1,191.2)	(1,350.3)	<b>SURPLUS (DEFICIT) before reserve income</b>	<b>(2,005.7)</b>	<b>(1,645.0)</b>	<b>(1,515.9)</b>	<b>(2,076.9)</b>	<b>(2,512.3)</b>	<b>(2,409.2)</b>		
(328.7)	(369.9)	(355.8)	(921.4)	(998.7)	(1,191.2)	(1,350.3)	<b>OVERALL SURPLUS (DEFICIT) after reserve income</b>	<b>(2,005.7)</b>	<b>(1,645.0)</b>	<b>(1,515.9)</b>	<b>(2,076.9)</b>	<b>(2,512.3)</b>	<b>(2,409.2)</b>		





## Position Performance Summary

From 11/30/2015 to 12/31/2015

ASHRAE, Inc. GENERAL Fund  
Jeff Littleton

Description	11/30/2015 Value	Additions Purchases	Withdrawal Sales	Realized Gain (Loss)	Unrealized Gain (Loss)	Income Expenses	12/31/2015 Value	Actual Gross (IRR)
<b>***Equity Mutual Funds &amp; ETFs***</b>								
DFA Intl Small Company	572,915	0	0	12,754	(18,772)	6,787	573,685	0.13
DFA Intl Value I	513,349	0	0	0	(20,582)	4,224	496,990	-3.19
DFA Large Cap Int'l (EAFE)	538,879	0	0	0	(15,713)	3,417	526,582	-2.28
DFA U.S. Large Co (S&P 500)	1,508,133	0	0	12,398	(45,729)	9,249	1,484,051	-1.60
DFA U.S. Large Value	1,741,789	0	0	70,388	(135,045)	10,140	1,687,273	-3.13
DFA U.S. Small Value	593,292	0	0	23,906	(63,579)	2,865	556,483	-6.20
DFA US Small Cap I	618,153	0	0	28,489	(64,129)	2,409	584,922	-5.38
Vanguard 500 Index	326,052	0	0	0	(6,957)	1,764	320,860	-1.59
Vanguard Mid-Cap Index	661,670	0	0	0	(20,700)	3,069	644,039	-2.66
Vanguard Value Index	48,600	0	0	0	(819)	327	48,108	-1.01
	7,122,832	0	0	147,936	(392,025)	44,251	6,922,994	
<b>***Fixed Income Mutual Funds &amp; ETFs***</b>								
DFA One-Year Fixed Income	844,917	0	0	722	(1,641)	527	844,526	-0.05
Doubleline Core Fixed Inc	665,799	0	(1,940)	0	(7,405)	1,940	658,395	-0.82
JPMorgan Strat Income	933,613	0	0	0	(14,911)	4,391	923,092	-1.13
Loomis Sayles Bond Inst'l	598,396	0	(26,732)	21,540	(38,269)	5,192	560,126	-1.97
Loomis Sayles Invst Grade	349,140	0	0	4,636	(10,920)	1,795	344,651	-1.29
PIMCO Total Return	1,296,156	0	(48,639)	44,651	(50,708)	3,988	1,245,448	-0.16
	4,688,022	0	(77,311)	71,548	(123,854)	17,834	4,576,238	
<b>***Cash Equivalents***</b>								
Schwab Money Fund	34,654	77,311	0	0	0	1	111,966	
	11,845,508	77,311	(77,311)	219,484	(515,880)	62,086	11,611,198	

## Position Performance Summary

From 11/30/2015 to 12/31/2015

ASHRAE, Inc. RESEARCH Fund  
Jeff Littleton

Description	11/30/2015 Value	Additions Purchases	Withdrawal Sales	Realized Gain (Loss)	Unrealized Gain (Loss)	Income Expenses	12/31/2015 Value	Actual Gross (IRR)
<b>***Equity Mutual Funds &amp; ETFs***</b>								
DFA Intl Small Company	302,747	0	0	6,740	(9,920)	3,587	303,154	0.13
DFA Intl Value I	271,230	0	0	0	(10,875)	2,232	262,587	-3.19
DFA Large Cap Int'l (EAFE)	284,197	0	0	0	(8,287)	1,802	277,712	-2.28
DFA U.S. Large Co (S&P 500)	975,938	0	0	8,023	(29,592)	5,985	960,354	-1.60
DFA U.S. Large Value	952,083	0	0	38,475	(73,817)	5,543	922,283	-3.13
DFA U.S. Small Value	313,621	0	0	12,637	(33,609)	1,514	294,164	-6.20
DFA US Small Cap I	326,507	0	0	15,048	(33,873)	1,272	308,955	-5.38
Vanguard Mid-Cap Index	349,508	0	0	0	(10,934)	1,621	340,195	-2.66
	3,775,832	0	0	80,923	(210,906)	23,556	3,669,405	
<b>***Fixed Income Mutual Funds &amp; ETFs***</b>								
DFA One-Year Fixed Income	402,222	0	0	344	(781)	251	402,036	-0.05
Doubleline Core Fixed Inc	354,187	0	(1,032)	0	(3,939)	1,032	350,248	-0.82
JPMorgan Strat Income	489,500	0	0	0	(7,818)	2,302	483,984	-1.13
Loomis Sayles Bond Inst'l	334,291	0	(14,934)	12,033	(21,379)	2,901	312,912	-1.97
Loomis Sayles Invst Grade	211,995	0	0	2,815	(6,631)	1,090	209,269	-1.29
PIMCO Total Return	716,246	0	(26,878)	24,674	(28,021)	2,204	688,224	-0.16
	2,508,441	0	(42,843)	39,865	(68,569)	9,780	2,446,674	
<b>***Cash Equivalents***</b>								
Schwab Money Fund	18,921	42,843	0	0	0	0	61,765	
	6,303,195	42,843	(42,843)	120,788	(279,475)	33,336	6,177,844	

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

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***Financial Update***

Presentation given to Executive Committee on  
Saturday, January 23, 2016 and revisions.

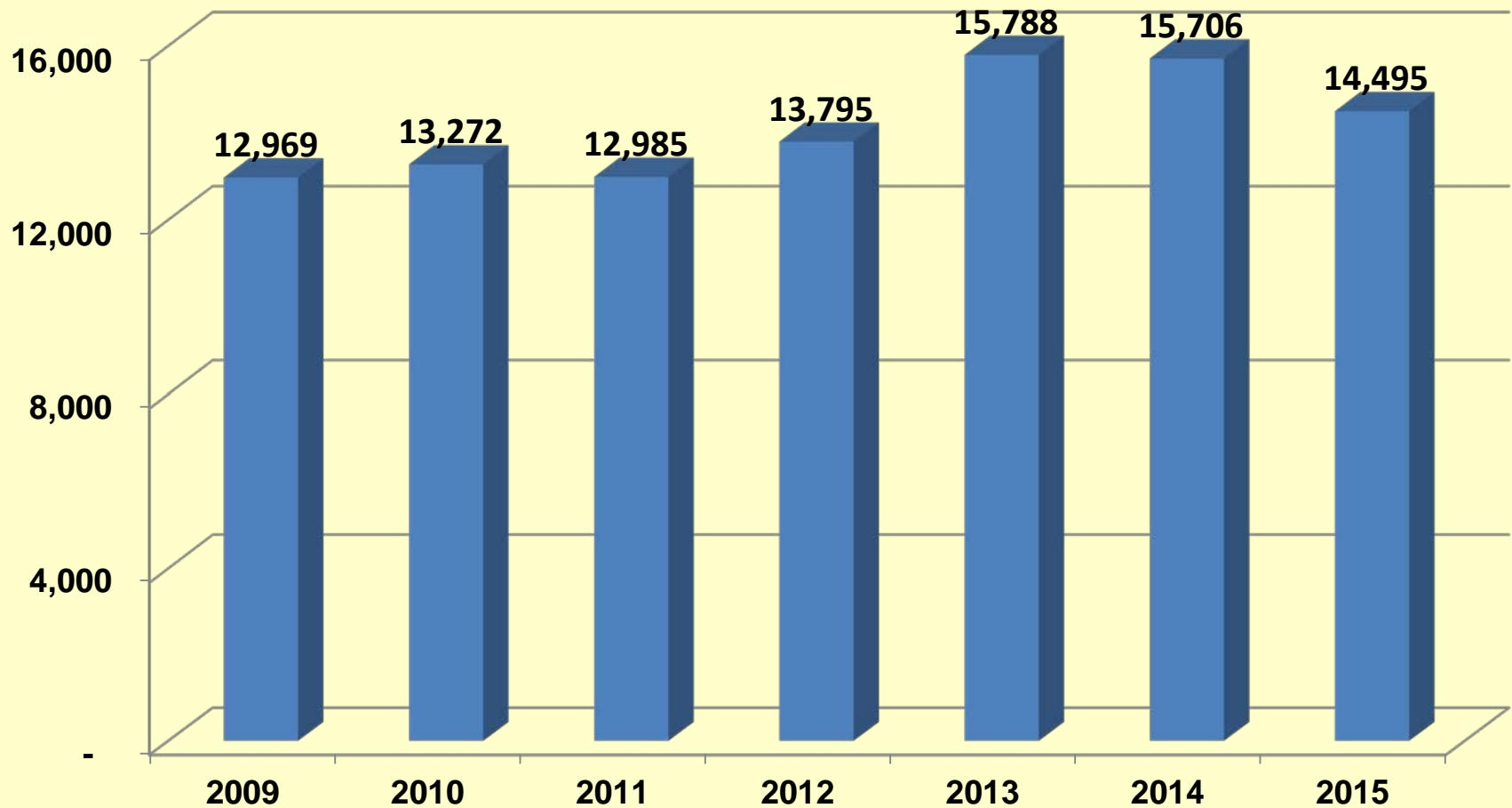
Winter Meeting  
January 24, 2016

# **FINANCIAL STATUS**

# Consolidated Cumulative Net Assets

(As of December 31)

\$ In Thousands



# General Fund

## 15-16 Budget to 15-16 Forecast as of December 31

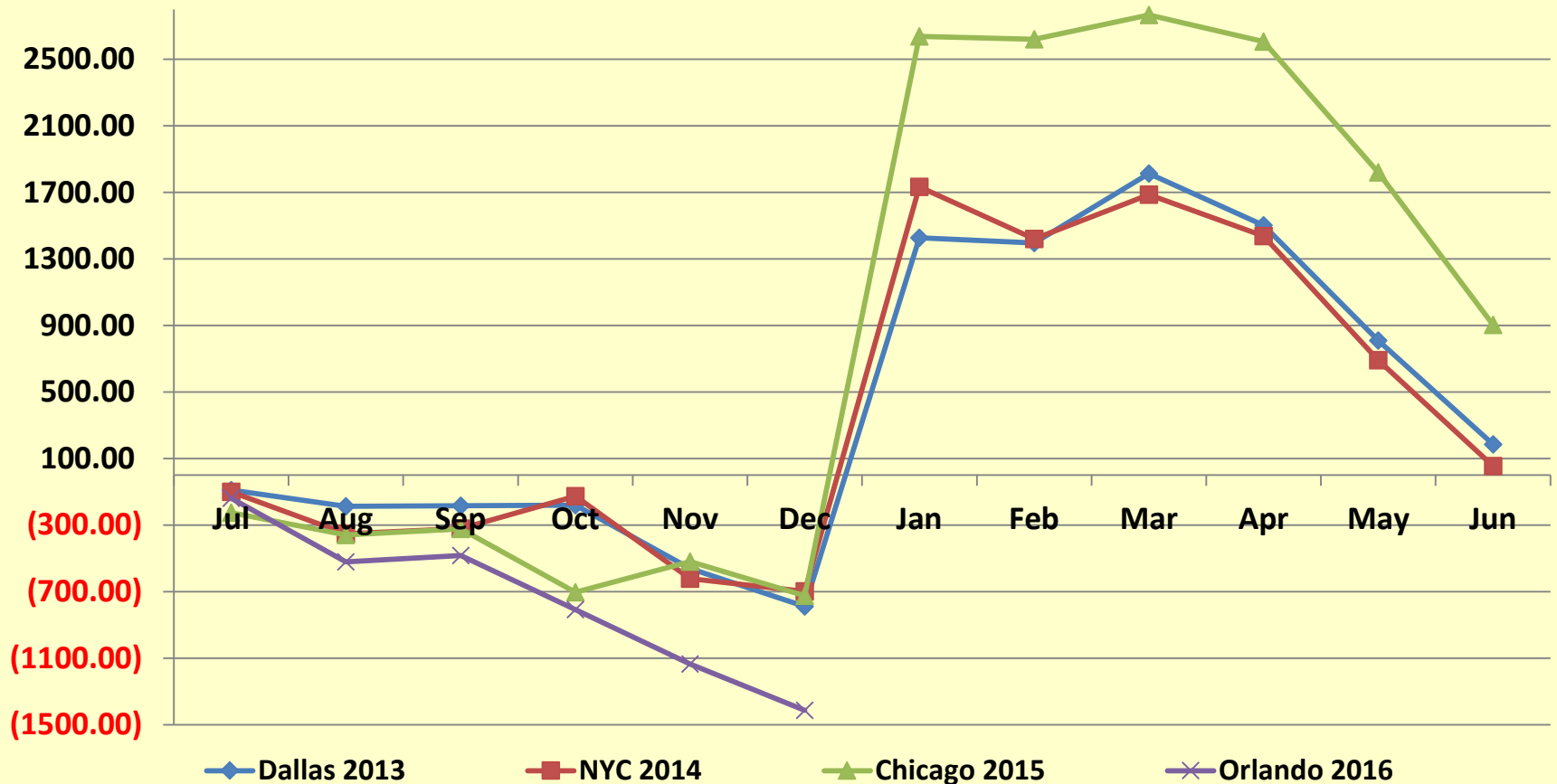
\$ In thousands

	15-16 Budget	15-16 Forecast
Revenues	\$22,853	\$23,104
Expenses	23,202	23,696
Surplus/(Deficit)	(449)	(592)

# General Fund Cumulative Net Revenue & Expense

December 31, 2015

\$ In Thousands



# Research Fund

## 15-16 Budget to 15-16 Forecast

\$ In thousands

	15-16 Budget	15-16 Forecast
Revenues	\$4,518	\$4,518
Expenses	\$4,518	4,541
Surplus/(Deficit)	\$0	(\$23)



# Major Variations

## Forecast vs. Budget

Six Months Ended December 31, 2015

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### Revenues

Inc/(Dec)

- Publications – New Titles; Digital Demand \$196K
- Advertising – Strategic Market Positioning \$101K

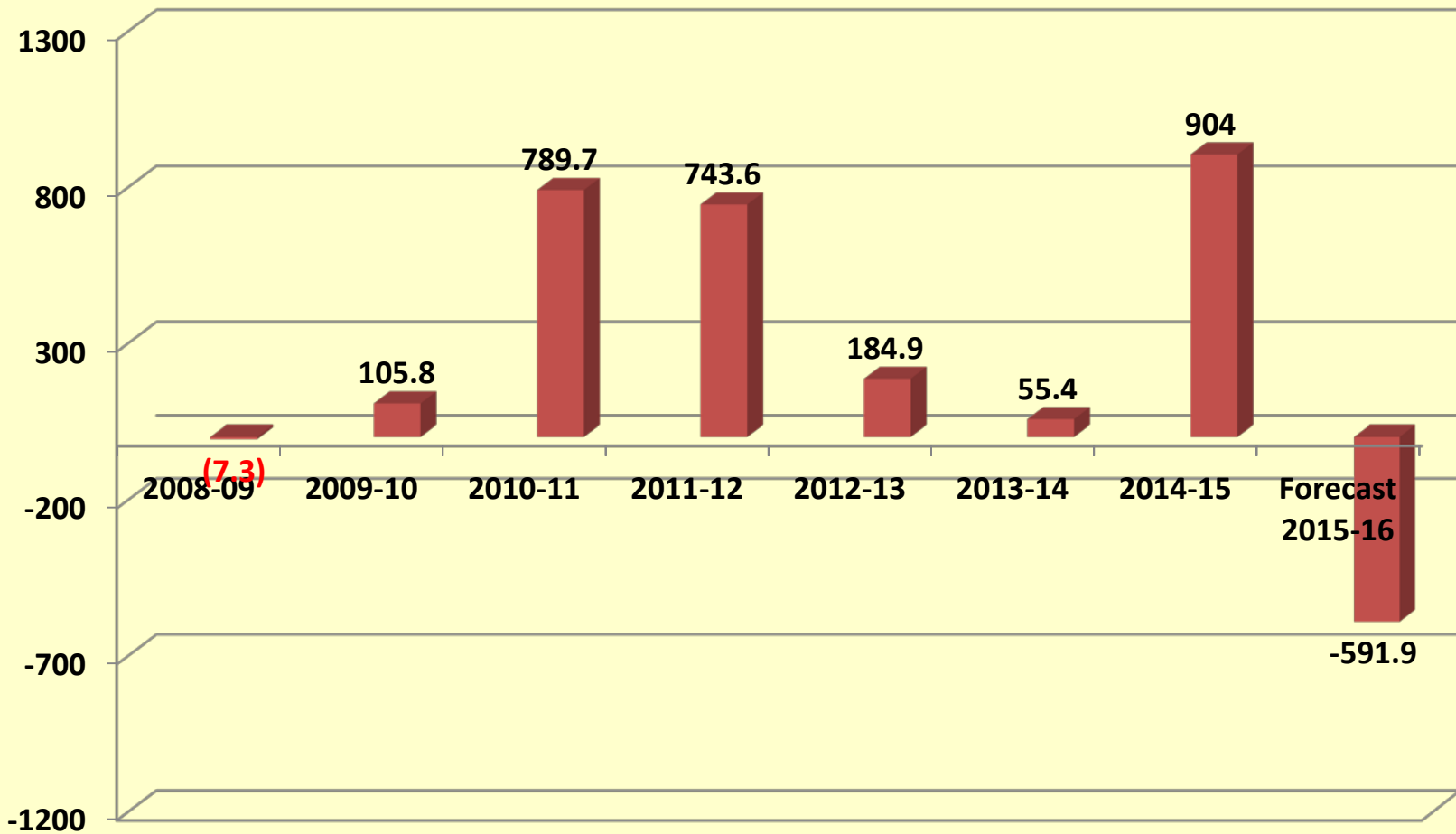
### Expenses

- Benefits - Health Insurance \$124K
- Publishing – Increased with Higher Sales \$161K
- Office – Primarily due to higher Int'l Deliveries \$ 58K
- Outside Services - Online Bookstore - Increased Commissions with Higher Sales \$ 55K

# General Fund Surplus (Deficit)

before investment reserve income  
(As of December 31, 2015, Exclusive of Foundation)

\$ In Thousands

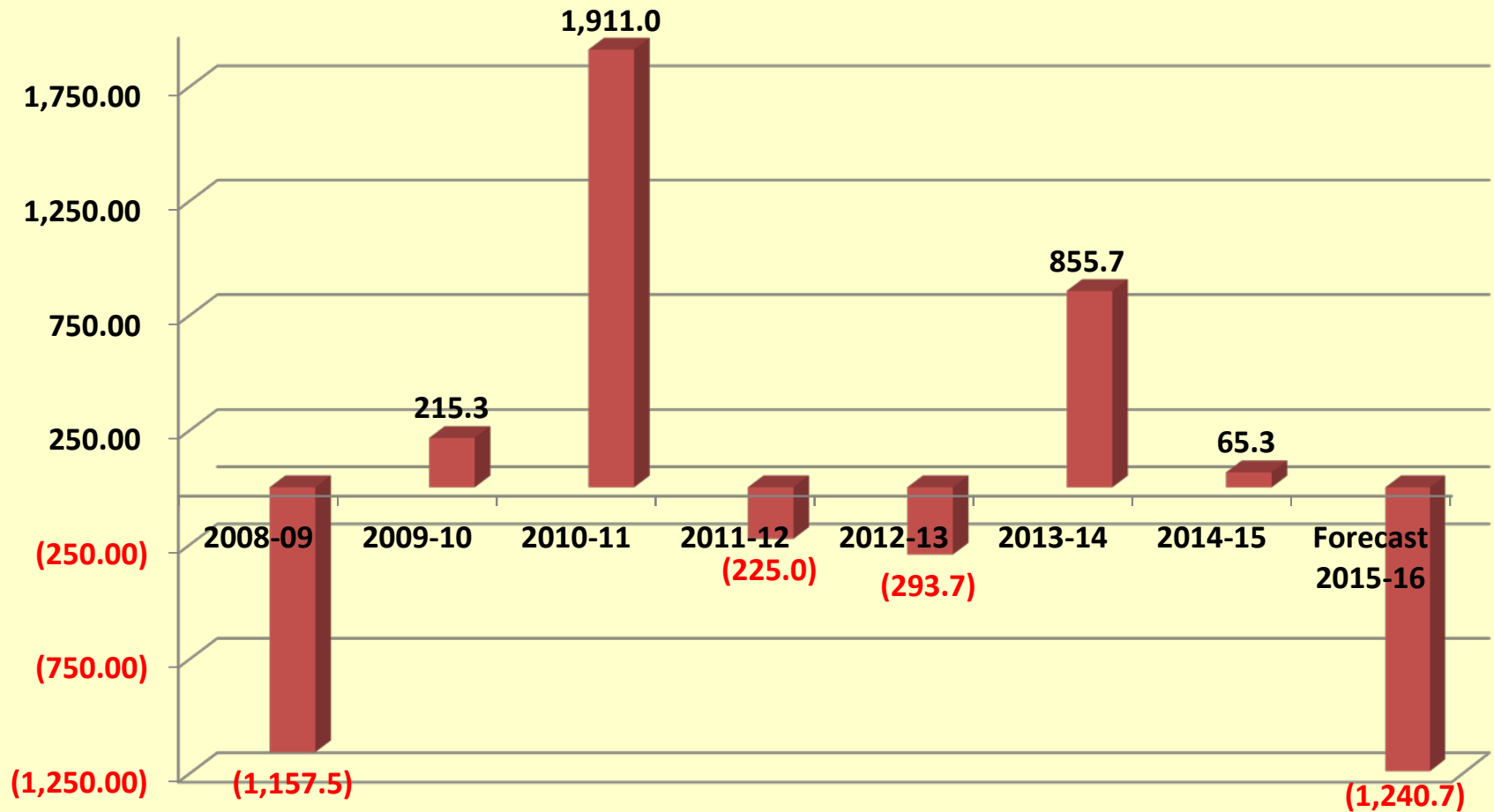


# General Fund Surplus (Deficit)

after non-recurring expenses and investment reserve income

(As of December 31, 2015, Exclusive of Foundation)

\$ In Thousands

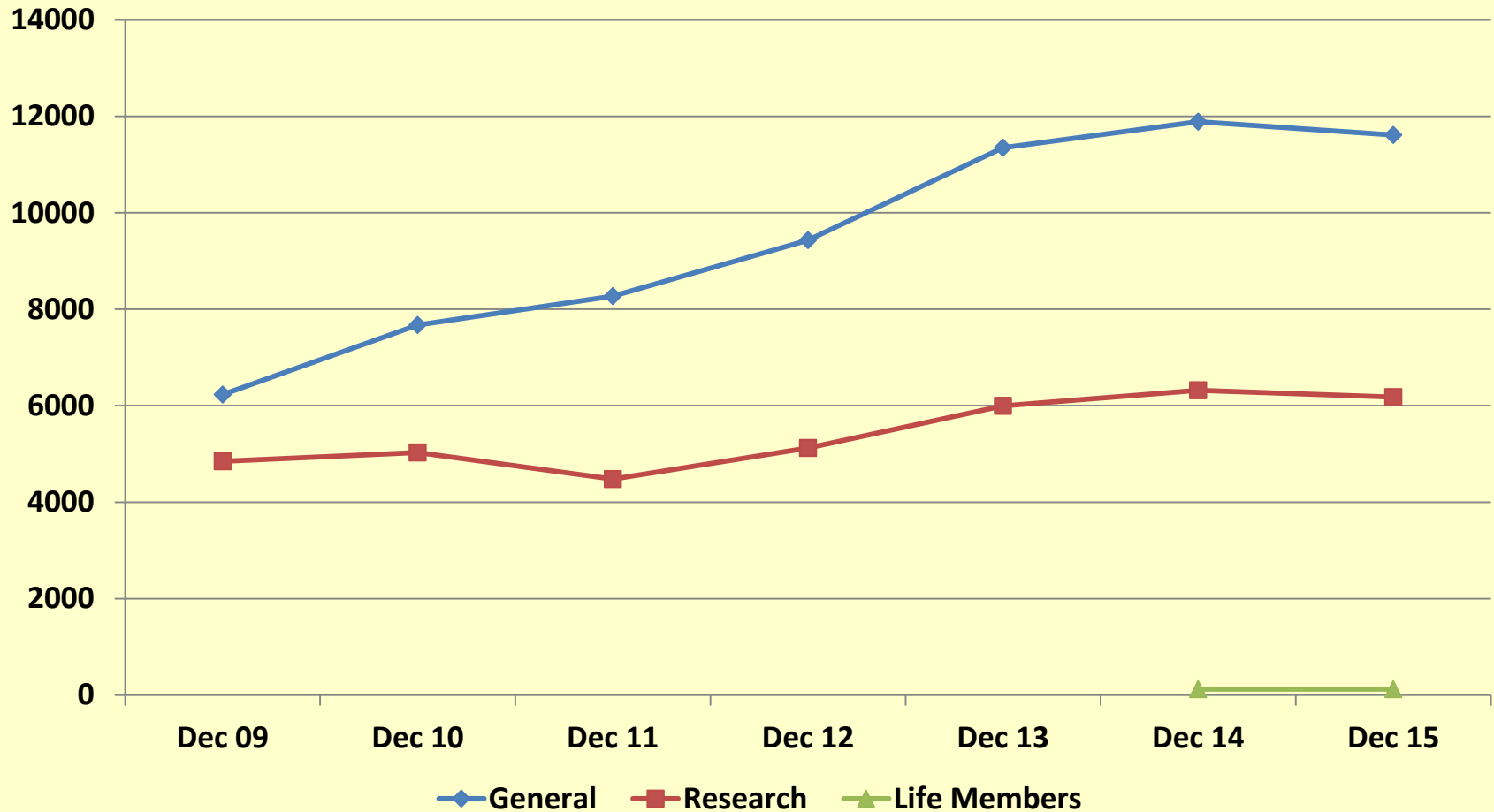


# Investment Reserves

# Investment Reserves

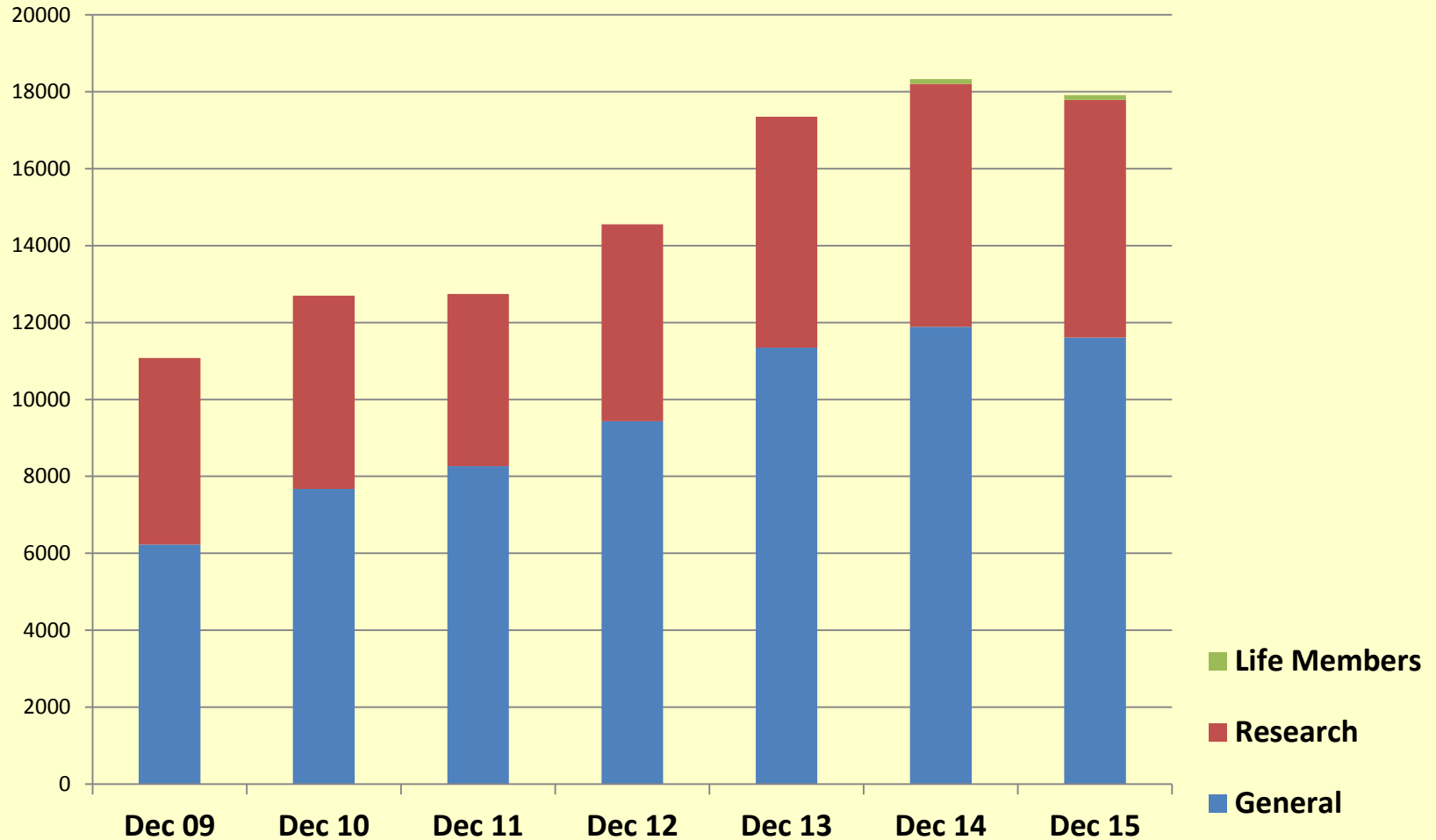
(Balance at end of December [exclusive of Foundation])

\$ In Thousands



# Consolidated Investment Reserves

\$ In Thousands



**QUESTIONS?**

Report to ASHRAE Board of Directors

November 2015

North American Technician Excellence (NATE)

I attended the October 14, 2015 NATE Board of Trustees meeting by teleconference.

NATE welcomed five new members to its board. Those were Michael R. Copp, Laura DiFilippo, Stephen D. Kennedy, Brent Schroeder and Matthew Pine.

Year to date, NATE has seen a significant increase in exams administered; 19% over 2014 actual and 10% over 2015 budget. The average pass rate of 71% is consistent across online and paper exams. There is also a significant shift from paper to online testing. Roughly 32% of 2015 YTD exams resulted from a manufacturer program (Carrier, Lennox, JCI). Trane, Mitsubishi, Daikin/Goodman/Amana and Rheem are to be targeted for discussions. Revenue for 2015 year to date is ahead of budget by \$150,000 with that figure projected to grow to \$180,000 by year end. Exam sales, online store sales and training course registration are exceeding expectations.

Beginning in January, 2016, NATE will offer new exams – a tiered structure with three levels and a Master Certification. These exams are intended to provide a certification structure to technicians from entry to experienced level and give contractors a tool to benchmark technicians at career intervals.

NATE's marketing efforts will be aimed at educating contractors, technicians, schools and state workforce agencies about the HVACR Support Technician certification. Some early interest was noted by the inclusion of the Heating & Cooling Support technician exam to Lennox Build-A-Tech programs, and the Ready-To-Work certificate exam link to Carrier University. NATE will, specifically target marketing efforts to contractors with more than 10 technicians or \$2M revenue. To date 99 new contractors have been approved as testing organizations.

The next NATE Board of Trustees meeting is scheduled for April 13, 2016 in Washington DC.

The NATE website can be accessed at: <http://www.natex.org/>

Respectfully Submitted,  
Stephen D. Kennedy  
ASHRAE Representative to NATE Board



**REPORT TO THE EXECUTIVE COMMITTEE**  
From the **CLIMA 2016 Advisory Committee**  
Meeting of January 23, 2016

12th REHVA World Congress, May 22 -25, 2016  
Aalborg, Denmark

Committee Membership

Constantinos A. Balaras, Chair; Edward K. C. Tsui; William P. Bahnfleth, Eckhard A. Groll; Tim J. McGinn (absent); Per Kvols Heiselberg - Host Organization Liaison; W. Stephen Comstock - Staff Liaison

**RECOMMENDATIONS FOR VOTE:**

1. Recommend to Executive Committee that ASHRAE give consideration to organizing a World Student Competition such as what REHVA organizes at the triennial CLIMA World Congress during a year in which CLIMA is not held.

Background: ASHRAE is participating in this year's 2016 REHVA World Student Competition at CLIMA. This is the first year that REHVA has opened the competition to students selected by associations that are not REHVA members (ASHRAE, ISHRAE, SARKEK, etc.). With the intent being to transition this award to a World Competition, it might be worthwhile for ASHRAE to consider organizing the competition at an ASHRAE Winter Conference in one of the off years of CLIMA, inviting other technical associations to nominate students. The recommendation of the ASHRAE CLIMA Advisory Committee is for ExCom to consider referring the concept to Student Activities, Honors and Awards or CEC for evaluation.

Fiscal Impact: None for consideration of the concept which is all that is being asked.

**INFORMATION ITEMS:**

1. The committee has selected a winner of its honorarium to support attendance by the author of the best Orlando conference paper written by a PhD student based on 17 paper reviews by CEC. The honorarium (\$2,500 from CLIMA 2016 Advisory Committee's budget) will be used by the student to present his Orlando paper during the CLIMA conference. The recipient is Joseph Firrantello, Penn State University, for "Field Study of Energy Use-Related Effects of Ultraviolet Germicidal Irradiation of a Cooling Coil."
2. The committee has selected a winner of its honorarium to support attendance by the author of the best Orlando conference paper written by a student in a Bachelor's Degree/Master's Degree program based on 6 paper reviews by CEC. The honorarium (\$2,500) will be identified within the advisory committee's budget or if needed through funding source identified by the Treasurer. The honorarium is to be used by the student to participate in the REHVA World Student Competition, representing ASHRAE. The recipient is Matthew Tokarik, Department of Architectural Science, Ryerson University, Toronto, Canada, for "A Multi-Objective Optimization Environment for Analysis of Passive Energy Conservation Measures in a Toronto House."

3. ASHRAE will present two ALI courses at CLIMA. The CLIMA organizers have confirmed these time slots will be reserved for no other training except ASHRAE training:  
Course 1 is Saturday, May 21, 1:30 to 5:00: Commissioning High Performing Buildings  
Course 2 is Sunday, May 22, 8:30 to 12:00: Design of High Performing Health Care Facilities
4. The ASHRAE Member reception will be held on Monday evening, May 23, 2016.
5. Approximately 750 abstracts have been accepted with it anticipated that 500 to 600 papers will be submitted and accepted for presentation. About 40 papers showing an American or a Canadian as the principal author have been submitted. ASHRAE promotion, however, would have likely resulted in submissions from many other countries.
6. ASHRAE members will be entitled to a special registration fee on the CLIMA website when registration becomes available. Arrangements will also be made for the ASHRAE CLIMA 2016 Advisory Committee to waive the registration key. The members of the committee will assist during the paper review process and if necessary will tap into CEC support.

January 23, 2016

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Date

*Costas Balaras*

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Costas A. Balaras, Chair

**REPORT TO THE EXECUTIVE COMMITTEE**  
From the Advanced Energy Design Guide Steering Committee  
Meeting of January , 2016

**RECOMMENDATIONS FOR VOTE:**

None

**INFORMATION ITEMS:**

1. Distribution Recap as of January 7, 2015
  - 560,976 AEDGs downloaded as of January 7, 2016
  - 26,140 titles distributed in print.
  - **587,116 total copies in circulation as of January 7, 2016**
  - 146,265 registrants account for free AEDG downloads
  
  - 59,825 copies of 50% AEDG-SMO since May, 2011
  - 27,312 copies of 50% AEDG-K12 since October, 2011
  - 41,236 copies of 50% AEDG-Retail since January 2012
  - 18,474 copies of 50% AEDG-Hospital since May 2012
  - 3,964 copies of 50% AEDG-Grocery since March 2015
2. Mr. Phoenix began as Chair of the Steering Committee in November 2015. Mr. Schwedler (chair emeritus) is assisting as requested.
3. The AEDG Steering Committee partner organizations continue to work on the execution of the implementation and outreach plan (IOP) for the guides. Outreach efforts to date include:
  - Presentation on the 50% Grocery Guide at that Food Market Institute (FMI) Convention in September 2015. Roughly 250 people attended the session.
  - Acceptance of a 4-hour workshop on the architectural aspects of the AEDGs for the AIA annual convention in May 2016.
  - Development of a brochure on the AEDG series of guides that is distributed at all conventions attended by AIA representatives
  - Preparation for a presentation on the 50% AEDG for Grocery Stores at the Better Buildings workshop in May 2016.
  - Expectation of multiple presentations to local ASHRAE chapters on the AEDGs in first quarter 2016
  - Approval of the 50% AEDGs as a prescriptive path for EA points in LEED® v4
4. DOE is studying the feasibility of net-zero energy guidance starting with K-12 schools. The Steering Committee still plans to work with DOE on future “net-zero” AEDG once their present research is finished
5. Work continues on 1627-RP *An Evaluation of the Actual Energy Performance of Small Office and K-12 School Buildings Designed in Accordance with the ASHRAE AEDGs*. The PMS and the contractor have selected both schools and offices buildings for the project analysis and audits on those buildings are in process.

6. The final report on 1651-RP *Development of Maximum Technically Achievable Energy Targets for Commercial Buildings* (Ultra Low Energy Use Building Set) is likely to be accepted at the January 2016 winter meetings. Outcomes from that project include:
  - Compared to ANSI/ASHRAE/IES 90.1-2013, the measures identified and modeled showed a national weighted change in energy consumption of -47.8% based on site energy and -47.8% based on source energy.
  - A paper proposal has been submitted for both the ASHRAE and the IBPSA-USA 2016 conferences.
7. The Residential Building Committee has been asked to provide proposed scoping information in support of their recommendation for the development of a residential AEDG.

January 14, 2016  
Date

*Pat Graef*  
Pat Graef, ASHRAE Representative to AEDG SC

**REPORT TO THE EXECUTIVE COMMITTEE**

From the PEAC Committee  
Meeting of January 26, 2016

**RECOMMENDATIONS FOR VOTE:**

None

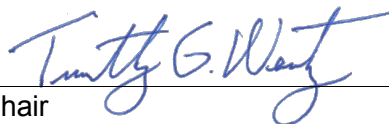
**INFORMATION ITEMS:**

1. PEAC has worked diligently over the first six months of the Society year and has developed a presidential theme currently entitled "Adapt Today to Shape Tomorrow".
2. The presidential theme currently has the following directives and initiatives:
  - a. Adapting ASHRAE resources to help expand member knowledge and develop the visionaries of tomorrow
    - i. Impart the cutting-edge skills necessary to excel in today's ever-changing world.
    - ii. Develop an internship program that links young men and women with an interest in our industry to practicing professionals
    - iii. Create a dynamic, energized educational platform that embraces a unified university theme
  - b. Adapting ASHRAE investments to energize chapters and engage members
    - i. Create a Chapter Opportunity Fund
    - ii. Form a Chapter Leadership Academy
    - iii. Adapt bEQ for use by student branches
  - c. Adapting ASHRAE technology to produce an immediate, direct benefit to members and society.
    - i. Create a technology portal linking ASHRAE's technical content to members
    - ii. Developing application guides written specifically for practicing professionals
    - iii. Create a series of phone apps giving members direct, immediate access to ASHRAE technology
3. The estimated budget for the above directives and initiatives is \$425,000.
4. The estimated budget for ongoing expenses for 2017-2018 and beyond is \$245,000

1/23/16

Date

Chair



**REPORT TO THE EXECUTIVE COMMITTEE**

From Foundation Board of Trustees

Meeting of January 25, 2016

**RECOMMENDATIONS FOR VOTE:**

1. That the Foundation Board of Trustees recommends the ASHRAE Executive Committee transfer \$8,000 from each of the following funds: Certain Teed fund 267, Manville fund 268, Knaus fund 269 and Owens fund 270 to ASHRAE Learning Institute Fund 259. In addition the Foundation Executive Committee recommends that the board transfer \$40,000 from Undesignated Fund 220 and \$60,000 from Undesignated Fund 101 to Fund 259.

**Background:** The Foundation pledged \$95,000 to support ALI in the 2015/2016 year. ASHRAE Learning Institute Fund 259 has experienced losses and does not have sufficient funds to satisfy that pledge. To meet the pledge and make up the deficit, the Foundation Executive Committee recommends transferring \$132,000 from the funds described above. Fiscal impact \$132,000.

2. That the Foundation Board of Trustees recommends to the ASHRAE Executive Committee make a grant of \$50,000 to ASHRAE Learning Institute for 2016/2017.

**Background:** The Foundation Executive Committee will work with ALI to determine their future needs for support. Given market conditions and anticipated Foundation obligations, support was lowered for 2016/2017.

3. That the Foundation Board of Trustees recommends to the ASHRAE Executive Committee that the following changes be made to the Rules of the Board: **(See attachment A1)**
4. That the Foundation Board of Trustees recommends to the ASHRAE Executive Committee to approve the creation of the Tucson Chapter Stan Adams Memorial Scholarship.

**Background:** This will be a 5 year pledge to create a Chapter Awarded Scholarship. We will receive the first installment of \$6,000 by June 30, 2016 and each year thereafter until June 2020 to complete this pledge. The scholarship selection will be made by the Tucson Chapter and will begin being awarded in 2021.

**INFORMATION ITEMS:**

1. Move that the ASHRAE Foundation Board of Trustees Manual of Procedures be amended by adding the following section:

Recommendations to the President Elect for Election as Foundation Trustee. The Chair of the Board of Trustees shall present a list of recommended candidates for election as Foundation Trustee to the ASHRAE President-Elect by September 30. ASHRAE staff will provide a list of nominated and qualified members to the Foundation chair by June 15.

The Nominating Committee shall receive this list and meet prior to the BOT meeting at the Annual Meeting to review the list and upcoming vacancies and recommend candidates to the BOT at the Annual Meeting. The BOT shall select a recommended list of candidates by ballot to be presented to the President-Elect. One name shall be submitted for each open position and names shall be submitted for three alternates. The recommendations should maintain four trustees from corporations that have been major benefactors of the Foundation.

2. That the Foundation Board of Trustees appointed a Nominating Committee for the 2016/2017 elections. They are as follows: Chair Dan Pettway, Don Colliver, Mike Hart, Jeff Clarke, and Dick Hayter, and Buddy Doll.

2016/01/25  
Date

James Wolf  
Chair

Move that the Foundation Board of Trustees recommend to the ASHRAE Board of Directors that the following changes be made to the Rules of the Board:

1. Modify Section 3.300.007.2.C ELECTION PROCEDURES FOR ASHRAE FOUNDATION TRUSTEES as follows:

C. The President-Elect shall recommend from the list of eligible candidates ~~a minimum of two one~~ candidates for each vacancy ~~and three candidates for the position of Alternate Trustee~~. All candidates shall be ranked in priority order. Prior to recommendation by the President-Elect, Staff shall confirm the candidates' willingness to serve if elected

2. Modify Section 3.300.009 as follows

**3.300.009 NOMINATION AND ELECTION TIMETABLE**

(09-06-24-15)

Action	Responsible	Completion Date
<p>A database will be continuously updated that lists qualified members who have indicated a willingness to serve if elected for each council and BOD-elected committee. The database will also indicate whether the member has previously served. Members currently serving standing committees and councils whose terms are not expiring are not eligible for consideration.</p> <p>The database shall also be continuously updated to list qualified members who have indicated willingness to serve (if elected) as Trustee of the ASHRAE Foundation and Scholarship Trustees. Members currently serving on the Board of Directors whose terms are not expiring are not eligible for consideration.</p>	Staff	Continuous process
1. From the President-elect's list of nominees for standing committees, the ASHRAE Foundation, and the ASHRAE Scholarship Program that were not selected for service, make additions to the member database.	President-Elect/Staff	3/31
2. Solicit member self-nomination for BOD-elected committee positions (Council positions not included) via e Society Newsletter, Insights and direct email to members. The solicitation shall include link to ashrae.org that lists qualifications for service on each committee. Add names to database.	Staff	4/30
<p>3. Solicit nominations from BOD members, committee chairs and other interested parties for the various BOD-elected council and committee positions. Provide nominators with qualifications for membership on each council and committee.</p> <p>Solicit nominations from BOD members, ASHRAE Foundation Trustees, Past Society Presidents, Golden Circle Award winners, Research Promotion Committee, staff at interest, and other source(s) as appropriate for service as Trustee on the ASHRAE Foundation. Provide nominators with qualifications for membership in the ASHRAE Foundation.</p>	Staff	5/30



Action	Responsible	Completion Date
Solicit nominations from BOD members, ASHRAE Scholarship Program Trustees, Past Society Presidents, staff at interest, and other source(s) as appropriate for service as Trustee on the ASHRAE Scholarship Program. Provide nominators with qualifications for membership in the ASHRAE Scholarship Program.		
4. Deliver updated database of qualified members for BOD-elected committees to BOD ExO members, council and committee chairs for review. <a href="#">Deliver updated list of nominations for position of ASHRAE Foundation Trustee to the Chair of the Foundation Board of Trustees.</a> Review is confidential so that potential candidates are not misled into thinking they have been selected for membership.	Staff	6/15
5. New Committee BOD ExO members, in consultation with past committee BOD ExO members, shall return list of nominees selected from database of members who have previously agreed to serve if elected. List shall include at least twice the number of members and alternates required for election. This process excludes the Nominating Committee, for which there is not BOD ExO member.	Staff	7/15
6. Appoint Nominating Sub-Committees for Councils, Standards, Technical Activities, Research Administration, Handbook and Nominating Committees per ROB Book 2, Election and Appointment Procedure. BOD sub-committees shall be tailored to the group being nominated, with DAL's on sub-committees for technical bodies and DRC's on sub-committees for non-technical bodies. Provide BOD sub-committee for Nominating Committee with list of all qualified members who have indicated a willingness to serve.	President	8/1
7. BOD sub-committees confirm willingness to serve if elected of all prospective nominees, rank nominees in order of preference and return ranked list and recommendations for chair and vice-chair of BOD-elected committees to Staff Assistant to the Board of Directors.	BOD Sub-committees	9/30
8. <a href="#">Obtain list of recommended candidates for the position of ASHRAE Foundation Trustee from the chair of the Foundation Board of Trustees.</a> <a href="#">Deliver</a> <a href="#">Deliver list of recommended candidates for Foundation Trustee and updated database of qualified members for ASHRAE Foundation Trustees, and ASHRAE Scholarship Program Trustees to the President-Elect for review.</a> Review is confidential so that potential candidates are not misled into thinking they have been selected for membership.	Staff	9/30
9. Review recommendations for chair and vice-chair of BOD-elected committees and revise if desired.	President-elect	10/15
10. President-Elect shall confirm willingness to serve if elected nominees to the ASHRAE Foundation and the ASHRAE Scholarship Program, rank nominees in order of preference, and return ranked list and recommendations to Staff.	President-Elect, Staff	11/1

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Action	Responsible	Completion Date
Staff shall advise the BOD of list of nominated Trustees, ranked, with biographies. Staff shall also provide to the BOD a list of qualified and eligible members who are not nominated by the President-Elect.		
11. BOD Sub-committee chairs present recommendations to Executive Committee.	BOD Sub-committee chairs	Fall ExCom Meeting
12. Advise BOD of list of proposed chairs, vice-chairs and ranked committee member nominees with biographies	Staff	11/15
13. Conduct BOD conference call to elect members and alternates of Councils and committees.	BOD	Winter NLT 12/15
14. After report of Nominating Committee to BOD, make required substitutions to previously elected members and alternates to BOD-elected councils and committees.	Staff BOD	Winter Meeting
15. Advise elected chairs, vice-chairs, members and alternates of BOD-elected councils and committees of their election	Staff	2/15
<p>* <u>Note:</u> Current rules are as follows:</p> <p>Councils -- a minimum of 2 per vacancy  Standards -- a minimum of 2 per vacancy  RAC -- a minimum of 2 per vacancy  TAC -- a minimum of 2 per vacancy  Handbook -- a minimum of 2 per vacancy  Nominating -- a minimum of 36  Foundation Trustees -- a minimum of <del>2</del> 1 per vacancy  Scholarship Trustees -- a minimum of 2 per vacancy</p>		

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## REPORT TO THE EXECUTIVE COMMITTEE

From the Scholarship Trustees  
Meeting of January 26, 2016

### RECOMMENDATIONS FOR VOTE:

1. The scholarship trustees recommend revising the criteria for the ASHRAE Region IV Benny Bootle Memorial Scholarship in Appendix D of the Scholarship Guidelines as follows:
  - b. The recipient of the Region IV Benny Bootle Memorial Scholarship must meet the general criteria for any ASHRAE scholarship as outlined in the ASHRAE Society Scholarship Program Guidelines. ~~No candidate will be considered for the Region IV Benny Bootle Memorial Scholarship unless that person has been ranked high enough to also qualify for any of the other available ASHRAE scholarships.~~

BACKGROUND: See Attachment A - Region IV Motion

### INFORMATION ITEMS:

1. The scholarship trustees selected 23 students to receive the following scholarships for the 2016-2017 academic year. The trustees will select students for the Society's Freshman, High School Senior, and Engineering Technology Scholarships at the 2016 ASHRAE Annual Conference in St. Louis.

#### **\$10,000 Willis H. Carrier Scholarship (one year)**

Casey Zarger, Pennsylvania State University, Architectural Engineering  
Kristen Cole, Pennsylvania State University, Architectural Engineering

#### **\$10,000 Reuben Trane Scholarship (awarded over two years)**

Danish Dhamani, Drexel University, Mechanical Engineering  
Jacquelyn Sommers, Kansas State University, Architectural Engineering  
Aldo Kusnardi, Minnesota State University, Mechanical Engineering

#### **\$5,000 One Year Scholarships:**

##### **Lynn G. Bellenger Engineering Scholarship**

Linda Komnang, City College of New York, Mechanical Engineering

##### **Alwin B. Newton Scholarship**

Amber Zuehlke, Lawrence Technological University, Architectural Engineering

##### **David C. J. Peters Scholarship**

Jacob Upton, California Polytechnic San Luis Obispo, Mechanical Engineering

##### **Duane Hanson Scholarship**

Dayna Hedges, Pennsylvania State University, Architectural Engineering

**Frank M. Coda Scholarship**

Mariana Silva, University of Texas Austin, Civil Engineering

**Gordon V. R. Holness Scholarship**

Caitlin Bubel, Drexel University, Mechanical Engineering

**General Scholarship**

Lauren Boyle, Pennsylvania State University, Architectural Engineering

**Legacy Scholarship**

Dallas Gardner, Kansas State University, Architectural Engineering

**ASHRAE Region IV Benny Bootle Memorial Scholarship**

Robert Cosby, Georgia Institute of Technology, Mechanical Engineering

**James R. Bullock, Jr. Scholarship**

Benjamin Bingham, North Carolina State University, Mechanical Engineering

**\$3,000 One-Year Scholarships:**

**Henry Adams Scholarship**

Rachel Kendall, University of Manitoba, Mechanical Engineering

**ASHRAE Region III Boggarm Setty Scholarship**

James Braza, University of Pittsburgh, Mechanical Engineering

**ASHRAE Region VIII Scholarship**

Matthew Coleman, University of Texas - Permian Basin, Mechanical Engineering

**ASHRAE Minnesota Chapter Peter Potvin Scholarship**

Ryley Davis, Minnesota State University, Mechanical Engineering

**ASHRAE Central New York Chapter King-Traugott Scholarship**

Sandhya Sapkota, City College of New York, Mechanical Engineering

**Donald E. Nichols Scholarship (University-specific)**

Hayden Rhymer, Tennessee Technological University, Mechanical Engineering

**J. Richard Mehalick Scholarship (University-specific)**

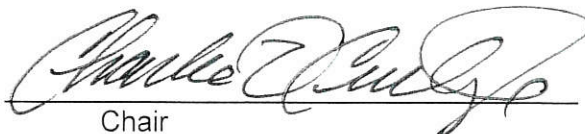
Kevin White, University of Pittsburgh, Mechanical Engineering

Richard Hollenbach, University of Pittsburgh, Mechanical Engineering

2. The Scholarship Trustees are reviewing criteria for the proposed Presidents Scholarship.
3. The Scholarship Trustees are reviewing its Guidelines and MOP to make sure they are accurate and up to date.

*JANUARY 26, 2016*

Date



Chair

**MOTION**

**Motion Identification No.**  
IV – 2015 – 1(pre-CRC)

**Moved By:** Southern Piedmont Chapter (via email)

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**Motion:**

The Southern Piedmont Chapter moves that the following requirement be removed from section “b” of the selection criteria for the ASHRAE Region IV Benny Bootle Memorial Scholarship:

*“No candidate will be considered for the Region IV Benny Bootle Memorial Scholarship unless that person has been ranked high enough to also qualify for any of the other available ASHRAE scholarships.”*

**Background Information:**

At the ASHRAE winter meeting in Chicago this past January, during the meeting of the ASHRAE scholarship trustees where college scholarship applications were judged and scholarships awarded, a situation arose that disqualified an applicant from Region IV based on the requirement above.

The Benny Bootle scholarship was not awarded (as the criteria requires) because there were other applicants who had overall rankings that were higher, and these applicants were not awarded a scholarship because the available pool of scholarships was exhausted before their position in the rankings was reached.

The Benny Bootle Memorial scholarship is an ASHRAE scholarship that was funded by contributions from Region IV members and is preferentially awarded to viable candidates from Region IV.

It is our assertion that, as long as there is a viable candidate from Region IV and that candidate meets the general criteria for ASHRAE scholarships as well as the other provisions of the Benny Bootle, the ranking of candidates that are from outside of Region IV is not relevant and should not be considered in awarding the Region IV scholarship.

These criteria originated in and are owned by Region IV, and are ours to keep or revise. It is our recommendation that we proceed with the latter and approve the motion set forth above.

---

**Fiscal Impact:** None

**Vote Count:**

For: 7    Against: 0    Abstained: 0    Chair Voting: CNV

Passed: X    Failed: \_\_\_\_\_    Withdrawn: \_\_\_\_\_

**College of Fellows**  
Report to BOD ExCom  
From Meeting of January 24, 2016

**Information Items**

1. The COF voted to move \$6,000 from their cash account into their existing endowment to permanently support a yearly travel award.
2. A motion was passed that states:

**COF motion:** “The COF shall be consulted as a resource whenever the criteria or process for the Fellow Award is proposed to be changed.” 15-0-0 CNV

**Background:** This motion was precipitated by an unofficial discovery of an upcoming motion at Members Council that changes both the criteria and the process for the Fellow Award. The COF fully supports examination and potential modification of the criteria and award process for the member grade of “Fellow”; however, these changes should not take place without the input of existing Fellows, as represented by the COF.

**Life Members Club**  
Report to BOD ExCom  
From Meeting of January 26, 2016

**Information Items**

1. The LMC is currently working with YEA to determine how the Club can best support them during their Leadership Weekends.
2. A certificate and check were presented to Dr. Michael Ohadi, the 2015-16 E.K. Campbell Award recipient, at the Life Member's Luncheon. The LMC is currently in the process of deciding on the 2016-17 E.K. Campbell Award recipient. Once the recipient has been decided, Honors & Awards will be notified for official approval. The recipient will be notified in July 2016 and recognized during the Las Vegas 2017 Winter Conference.

**REPORT TO THE EXECUTIVE COMMITTEE**  
From the Joint Exposition Policy Committee  
Meeting of January 24, 2016

**INFORMATION ITEMS:**

**1. AHR Expo® 2016 – Orlando, FL**

- 469,540 sq. ft. exhibition space sold (2<sup>nd</sup> largest after 2015 Chicago show (486,600 sq. ft. sold)
- 2063 exhibitors, 212 first-year exhibitors, 590 international companies
- 30,000 pre-registrations (approximate) with an expected 60,000, including exhibitor personnel
- No cancellations to date due to weather

**2. AHR Expo® 2017 – Las Vegas, NV**

- 412,000 sq. ft. exhibition space sold with the potential for over 500,000 sq. ft. to be sold for the first time in the show's history
- 929 exhibitors (exhibitors are buying larger spaces)

**3. AHR Expo® 2018 - Chicago, IL**

- 525,00 sq. ft. available

**4. Future AHR Expo® Locations & Dates**

- 2019 – Atlanta, GA            January 14-16
- 2020 – Orlando, FL        February 3-5
- 2021 – Chicago, IL        January 19-21
- 2022 – Las Vegas, NV     January 31 – February 2 (Tentative)
- 2023 – Atlanta, GA        February 6-8 (Tentative)
- 2024- Chicago, IL        January 22-24 (Tentative)

**5. AHR Mexico**

- Rotation Schedule for AHR Expo® Mexico (Attachment A)  
Alternate every other year between Mexico City and Monterrey; Guadalajara every 6<sup>th</sup> year.
- Largest AHR Expo® Mexico to date was 2014 Mexico City (72,824 sq. ft. exhibition space sold)

**2015 – Guadalajara**

- First time AHR Expo® Mexico has been held in Guadalajara
- 47,125 sq. ft. exhibition space sold
- 7,000+ attendees

**2016 – Monterrey – September 20-22**

- 61,755 sq. ft. exhibition space under contract (last show in Monterrey - 66,980 sq. ft. sold)

**2018 – Mexico City – October 2-4**

6. IEC approved a process that will allow chapters outside North America to request a variance from existing guidelines regarding support of conferences in their country. (Attachment B)

1-25-2016

Date

Bill Harrison

Chair



**AHR Expo-Mexico**

- PROPOSED ROTATION -

2015 – Guadalajara (every 6 years)  
2016 – Monterrey (every 4 years)  
2017  
2018 – Mexico City (every 4 years)  
2019  
2020 – Monterrey (every 4 years)  
2021 – Guadalajara (every 6 years)  
2022 – Mexico City (every 4 years)  
2023  
2024 – Monterrey (every 4 years)  
2025  
2026 – Mexico City (every 4 years)  
2027 – Guadalajara (every 6 years)  
2028 – Monterrey (every 4 years)  
2029  
2030 – Mexico City (every 4 years)

## International ASHRAE Chapter Involvement with Other Shows outside North America

1 There will be no use of the term “Sponsor”, “Sponsorship”, or “Endorse”, “Endorsement”. The use of “Support” or “Supporter” would be acceptable.

2 IEC reserves the right to turn down any request for a variance for reasonable cause, including any detriment to the US AHR Expo.

3 Any supporter may use the Chapter NAME only but not the ASHRAE Logo itself

4 Any variance granted will be on a one-time basis, case by case with a maximum of five.

5 AHR Expo must be promoted at any event for which a variance is granted

6 Granting of variance will depend on factors including:

- Location of Event / Country
- Size of Event
- Event’s Organizer



**The American  
Institute  
of Architects**

## **Memorandum of Understanding**

### **ASHRAE And American Institute of Architects**

Founded in 1894, ASHRAE, Atlanta, Georgia advances the arts and sciences of heating ventilating, air-conditioning and refrigeration to serve humanity and promote a sustainable world.

Founded in 1857, the American Institute of Architects (AIA) is the leading professional membership association for licensed architects, emerging professionals and allied partners. AIA serves as the voice of the architecture profession and the primary resource for AIA members in service to society.

ASHRAE and AIA agree to support the Memorandum of Understanding to advance and promote the mutual interests of their respective members. We are committed to working together toward on the following activities and goals:

#### **CONSISTENT LEADERSHIP COMMUNICATION**

Recognizing the importance of communication in organizational collaboration, both organizations commit to hold regular conference calls between staff, and two liaison meetings annually (either in person or via conference call) of designated ASHRAE/AIA senior representatives to:

- Ensure ongoing advancement of collaborative projects.
- Keep each respective organization informed of major initiatives.
- Discuss new opportunities for collaboration.

ASHRAE shall take responsibility for initiating the first annual liaison meeting. Action items with assigned responsibilities shall be recorded at each meeting. The parties responsible for ensuring this MOU is actively pursued through the term of the agreement are the Executive Vice president (ASHRAE) and the Director of Industry Relations (AIA).

#### **CONFERENCES AND MEETINGS**

Each organization agrees to provide the other with a meeting invitation and two complimentary VIP registrations to the primary annual meeting, as well as alert the other to calls for entries for their annual meetings.

ASHRAE and AIA agree to explore opportunities to provide speakers at the other organization's meetings, if possible, to help provide updates and perspectives on technologies and trends of mutual interest.

Where mutually beneficial, each organization shall help publicize the other organization's meetings and promote attendance.

### **YOUNG PROFESSIONALS DEVELOPMENT**

ASHRAE and AIA agree to connect the leaders of the Young Engineers in ASHRAE (YEA) and Young Architects Forum (YAF) to explore joint activities that can help optimize collaboration between engineers and architects early in career development. YAF participate in YEA Leadership Weekend is one example.

### **ADVOCACY AND PUBLIC OUTREACH**

Where mutually beneficial and to the extent allowed by laws and corporate policies, ASHRAE and AIA agree to work together on common public affairs goals and visions. During annual liaison meetings, public affairs strategies will be discussed and common goals identified. Collaborative opportunities to be considered include:

- Joint promotion of codes and standards at the local, state and federal levels.
- Promoting mutually beneficial positions during the development and passage of state and federal legislation.
- Education of legislators on issues important to the members of each organization.

### **PUBLICATIONS**

Recognizing that electronic and print publications are a primary means of disseminating new technologies, trends and practices, ASHRAE and AIA agree to:

- Provide at least one complimentary subscription the primary membership periodical to be received at the headquarters location of the other organization.
- Explore opportunities to jointly produce publications of mutual benefit.
- Cross-market each organization's publications where appropriate and with industry standard distributor discounts.
- Use periodicals to promote the other organization's events, publications and other activities.

### **EDUCATION**

As leading providers of conventional and online educational services and in recognition of the vital role professional development has for our respective members, ASHRAE and AIA agree to:

- Cross-market educational offerings and the national and international levels as possible, primarily via events calendars.
- Explore opportunities to co-develop and sponsor new courses or other training programs that take advantage of overlapping and complimentary expertise between ASHRAE and AIA.
- Discuss ways that certificate or curated education content tracks can be jointly developed or administered.

Recognizing a parallel commitment to promote educational opportunities in architecture and engineering at the elementary and secondary levels, ASHRAE and AIA agree to exchange ideas on how to promote Science, Technology, Engineering, Architecture and Math (STEAM) education and ensure our respective disciplines are included. The organizations agree to explore ways to work together on STEAM and elementary/secondary education promotion at the local, national, and global levels.

## **TECHNICAL ACTIVITIES COORDINATION**

ASHRAE and AIA members share many areas of common technical interest, including built environment health and safety, energy efficiency, and resilience and materials transparency. The two organizations agree to foster technical cooperation in these and other areas of common interest by:

- Encouraging members in each organization to participate on technical committees and task forces.
- Providing opportunities to participate in and comment on proposed standards, guidelines, policies, and position statements developed on technical subjects as they relate to buildings and community developments.
- Establishing liaison representatives to key technical committees where mutually beneficial to do so.

## **RESEARCH**

Recognizing the importance research plays in accelerating the transformation to a more sustainable built environment, ASHRAE and AIA agree to:

- Promote research in areas where research results will add to the body of knowledge in health, resiliency, energy efficiency, and sustainability.
- Disseminate research results quickly, focusing on high-impact findings.
- Identify opportunities for research funding from other sources.

## **ADMINISTRATIVE CONTACTS**

The administrative contacts for actions tied to this MOU shall be:

### **For ASHRAE:**

Jeff Littleton  
Executive Vice President  
ASHRAE  
1791 Tullie Circle NE  
Atlanta, GA 30320  
Tel: 404-636-8400  
Email: [jlittleton@ashrae.org](mailto:jlittleton@ashrae.org)

### **For AIA:**

Robert Ivy, FAIA  
EVP/CEO  
AIA  
1735 New York Ave, NW  
Washington, D.C. 20006-5292  
Tel: 800-242-3837  
Email: [robertyivy@aia.org](mailto:robertyivy@aia.org)

## **TERMINATION**

Either party may terminate this MOU, with or without stated cause, upon providing the other party with thirty (30) days written notice of intent to terminate.

**TERM**

The term of this Memorandum of Understanding shall begin when signed by both parties and shall terminate at the end of three (3) years unless extended at that time by written agreement.

**LEGAL STANDING**

This MOU reflects a commitment by ASHRAE and AIA to continue and enhance their working relationship and individual efforts toward achieving mutual objectives described above. It does not create a binding obligation or agreement between the two organizations, and neither organization has an obligation to negotiate toward or enter into a binding written agreement. In addition, this MOU does not create a partnership, joint venture, fiduciary relationship or similar relationship between ASHRAE and AIA. Furthermore, it is understood that this Memorandum of Understanding is conceived as a dynamic document, meant to change as circumstances and priorities warrant. It may be modified or amended by written agreement between both organizations.

**FOR ASHRAE**

**FOR AIA**

\_\_\_\_\_  
David Underwood, President

\_\_\_\_\_  
Russell Davidson, FAIA, President

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

\_\_\_\_\_  
Jeff Littleton, Executive Vice President

\_\_\_\_\_  
Robert Ivy, FAIA, Executive Vice President/CEO

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

**REPORT TO THE BOARD OF DIRECTORS**  
From the IEQ-GA Ad Hoc Committee  
Meeting of January 24, 2016

**RECOMMENDATIONS FOR VOTE:**

No vote

**INFORMATION ITEMS:**

The plan for the ASHRAE IEQ-GA Presidential Ad Hoc is to finish its work establishing the Indoor Environmental Quality-Global Alliance by June 2016. At the ASHRAE meeting in St. Louis, a board with a president, vice-president and treasurer/secretary will be established. For this purpose the attached draft bylaws has been developed and circulated to the member organizations. This will be discussed at the members meeting (including the ASHRAE Ad Hoc) in Orlando, Tuesday January 26, 4-5:30pm.

Other activities of the IEQ-GA Ad Hoc Committee include:

- Promoting IEQ-GA in many conferences (ASHRAE, IAQA, REHVA, AIVC, Healthy Buildings, IAQ2016, etc.) through presentations.
- Developing a web-page and newsletter that includes news from the different member organizations.
- Establishing an affiliate member category especially for trade organizations

There is still an urgent need to get Acoustic and Lighting societies involved. Contact to the major international societies like CIE for lighting and ICA has not yet been successful. There is also a need to establish a budget for IEQ-GA. For example, will it have its own budget or will everything be split between the members?



2016-01-14

Bjarne W. Olesen

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Date

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Chair

**BYLAWS-ORGANIZATIONAL PROCEDURES**  
**Indoor Environmental Quality - Global Alliance**  
**(IEQ- GA)**

**Article I ORGANIZATION**

**Section 1.1 Name.** The name of this entity is Indoor Environmental Quality – Global Alliance, and its abbreviated title is IEQ-GA.

**Section 1.2 Office.** IEQ-GA may have offices located as the Board of Directors may establish and changes as needed to support the purposes of the entity.

**Section 1.3 Objectives.** IEQ-GA is organized and operated for the exclusive purpose of bringing together professionals from various disciplines that deal with the indoor environment. IEQ-GA is dedicated to promoting the exchange of indoor environmental information, education and research for the safety and well-being of the general public. The Member organizations will work together to create a common understanding and messaging of research gaps, research results that can be transferred to practice in the form of standards and codes that support health and performance based definitions of IEQ, and policy agendas and advocacy positions.

**Section 1.4 Dissolution.** In the event of dissolution of the entity (IEQ-GA), whether voluntary, involuntary, or by operation of law, any disposition of the assets of the entity shall be made only to such Member organizations as shall at that time have exempt status under Section 501 (c) of the U.S. Internal Revenue Code of 1986, as amended, or under such successive provision of the Code as may be in effect at the time of dissolution.

**Article II MEMBERSHIP**

**Section 2.1 Founding Members**

The founding Member organizations of the IEQ–GA are as follows:

- AIHA - American Industrial Hygiene Association
- AIVC - Air Infiltration and Ventilation Centre
- ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers
- AWMA - Air and Waste Management Association
- IAQA - Indoor Air Quality Association
- REHVA - Federation of European Heating, Ventilation and Air Conditioning Associations

**Full Members.** A Full Member organization is an organization (including governmental agencies and professional associations), including Founding Members, that is a voting member of the IEQ-GA. A Full member is bound by the provisions listed in the IEQ-GA Memorandum of Understanding (MOU and these Operational Procedures and Bylaws. Full member organizations shall



appoint one voting member and one alternate member to the IEQ-GA Board of Directors.

**Affiliate Members.** An Affiliate Member is a non-voting organization (including governmental agencies and trade associations) that is provided with information about the activities of IEQ-GA, and that participates in certain activities such as conference calls and meetings when possible. The Affiliate Member organization is not bound by any provisions listed in the IEQ-GA MOU or these Operational Procedures. An affiliate member organization shall appoint one member and one alternate member to attend and participate in the deliberations at the IEQ-GA Board of Directors' meetings. However, the affiliate member representatives will not be voting members of the IEQ-GA Board of Directors.

**Section 2.2 Application for Membership.** Application for membership shall be made on such forms as may be approved by the Board of Directors of IEQ-GA.

**Section 2.3 Rights and Privileges.** All rights and privileges of a Full Member organization of IEQ-GA shall be entitled to the Member organization only, and shall not be delegated or transferred, except that each Member organization is entitled to vote in person or by written proxy given to another Member organization entitled to vote. The delegation of a vote shall be dated within three months of date of execution, which proxy shall be subject to the provisions as may be set forth by IEQ-GA.

**a.** All rights, title, and interest of a Member organization in IEQ-GA, or its property, shall cease on the termination of membership by resignation or otherwise, and shall vest in IEQ-GA.

**b.** Each Member organization, upon election to membership, shall be bound thereupon by the provisions of the Operational Procedures and Bylaws, and all amendments thereto.

**Section 2.4 Emblem of Membership.** The corporate identity, logo types, signage, emblems and trademarks are the sole property of IEQ-GA and its Member organizations in good standing. Unauthorized use of the above-mentioned resources may constitute fraud, and IEQ-GA may employ legal means to cause that the unauthorized use cease and desist. Such usage that may result in deformation or discredit of IEQ-GA may necessitate legal processes to rectify such discredit and deformation to the IEQ-GA and its Member organizations in good standing. IEQ-GA's Board of Directors is responsible for establishment of logo usage policies.

**Section 2.5 Resignation.** Any Member organization may resign at any time by such Member's written request received by the Secretary/Treasurer.

**Section 2.6 Reinstatement.** A Member organization that has resigned,

or who has been dropped from membership for cause may be reinstated as of the original date of membership if the remaining Member organizations of IEQ-GA vote in favor of reinstatement of the Member organization.

### **Article III MEETINGS OF MEMBERS**

**Section 3.1 Meetings.** As per the MOU for the IEQ-GA, there will be two (2) annual meetings of the Member organizations, either in person or my electronic means. A quorum is the minimal number of member organization appointees or alternatives who must be present for the valid transaction of business. A quorum will exist when there are a minimum of 50% plus one of the Member organizations present in person or by electronic means.

**Section 3.2 Voting.** At any meeting, each Member organization shall be entitled to one vote which may be cast in person or by proxy. A proxy shall not be valid longer than three (3) months from its date of execution.

### **Article IV OFFICERS**

**Section 4.1 Officers.** The officers of IEQ-GA shall be the President, the Vice President, and the Secretary/Treasurer. The President, the Vice President, and the Secretary/Treasurer shall be representatives of Member organizations of the IEQ-GA, and each officer shall be elected annually by a vote of all Full Member organizations' representatives. Their term of office shall continue until their successors have been elected and installed. Elected officers shall receive no salary, emolument or compensation for services rendered to IEQ-GA as an officer. The President, the Vice President, and the Secretary/Treasurer shall be eligible for re-election to the same office for two (2) additional consecutive years. (Maximum of three (3) years without the intervention of at least one (1) year).

**Section 4.2 Duties.** All officers of IEQ-GA shall perform the duties customarily attached to their respective offices and such other duties and services incident to their respective offices as are delegated to them by these Organizational Procedures/Bylaws or as may from time to time be assigned to them by the Members.

**Section 4.3 President.** The President shall be the chief executive officer of IEQ-GA, and shall have general direction of the affairs of IEQ-GA, subject, however, to the control of the Member organizations. The President shall at each meeting of the IEQ-GA Board of Directors and from time to time report to the Member organizations all matters within the President's knowledge which the interest of IEQ-GA may require to be brought to their notice; shall preside at all meetings of the member organizations and at all meetings of the Board of Directors; shall sign and execute all agreements as delegated by the Board except in cases where the signing and execution thereof shall be expressly delegated or permitted by the Board or by these Bylaws to some other officer or agent of IEQ-GA; and in general shall perform all duties incident

to the office of the President and such other duties as from time to time may be assigned by the Board of Directors or as are prescribed by these Operational Procedures/Bylaws.

**Section 4.4 Vice President.** If the President dies, resigns, or is removed from office, the Vice President shall immediately become President and shall serve for the remainder of the term of his/her immediate predecessor. If the remainder of the original term is less than six (6) months, the Vice President shall serve as the President for the next year. If the Vice President dies, resigns, is removed from office or becomes President in accordance with the foregoing provisions, the office of Vice President shall remain vacant until the next meeting of the IEQ-GA Board of Directors.

If there is a vacancy in the offices of both President and Vice President, the Secretary/Treasurer shall act as President until the next meeting of IEQ-GA Board of Directors. The Vice President shall perform all duties as from time to time may be assigned by the Member organizations or as prescribed by these Operational Procedures/Bylaws.

**Section 4.5 Secretary/Treasurer.** The Secretary/Treasurer shall act as secretary of IEQ-GA. The Secretary/Treasurer shall have responsibility for the funds of IEQ-GA and IEQ-GA's books of account, which shall be open to the inspection of any Member organization. The Secretary/Treasurer may take part in the deliberations of all meetings. The Secretary/Treasurer shall have charge of keeping the books of IEQ-GA, including all minutes for Member meetings. The Secretary/Treasurer or their designee shall present, at each meeting of the IEQ-GA Board of Directors, a summary of membership enrollment and other pertinent records, and shall perform such other duties as may be assigned by the Member organizations or the President.

## **Article V COMMITTEES**

**Section 5.1 Committees of IEQ-GA.** From time to time, the Member organizations may decide to form Committees to perform specific duties as assigned by the IEQ-GA Board of Directors. The committees of IEQ-GA shall consist of Standing or Special committees. Standing Committees are of a continuing nature, while Special Committees are for a specific purpose.

**Section 5.2** Unless otherwise provided, the committee members and the respective chairs thereof shall be selected by the President from time to time during the President's term with the approval of the Member organizations. The General Committees may hold their meetings at any time after the members are thus confirmed.

**Section 5.3** IEQ-GA Member organizations shall prescribe the qualifications of members of committees and the number of committees. The Member organizations may in addition, unless otherwise provided, adopt rules specifying the size of committees, the length of term members may serve, when members

may be reappointed, selection procedure, and approval of appointments, except as otherwise provided in these Organizations Procedures/Bylaws.

**Section 5.4** The IEQ-GA Board of Directors may from time to time create other committees of one or more members, and define their powers and duties, and it may abolish any such committees.

**Section 5.5** The Chair and Vice Chair of each committee shall be a Member organization representative to the IEQ-GA Board of Directors.

**Section 5.6** The President may appoint any person or persons to serve in a consulting capacity to any committee.

**Section 5.7** All Committees shall render to the IEQ-GA Board of Directors, prior to each meeting of the IEQ-GA Board of Directors, reports of their activities and shall submit progress reports at other times on request of the President.

**Section 5.8** The IEQ-GA Member organizations may, by two-thirds (2/3) vote of members present remove a member of any committee. The President may directly recommend, or recommend upon request of the Chair of a Committee, or of 2/3's of the members of the Committee, removal of any member, including the Chair, of any Committee to the IEQ-GA Member organizations for approval.

## **Article VI AMENDMENTS**

**Section 6.1** Written notice of a proposed amendment to these Operational Procedures/Bylaws, subscribed to by two-thirds (2/3) of the Member organizations, may be given at any duly convened meeting of the IEQ-GA Board of Directors. Notice of such proposed amendment shall be set forth in the notice of the next succeeding meeting of the IEQ-GA Board of Directors. The Operational Procedures/Bylaws shall be amended by two-thirds (2/3) of the votes cast at such meeting.



## Memorandum of Understanding

### ASHRAE And Association of Facilities Engineering

Founded in 1894, ASHRAE, Atlanta, Georgia advances the arts and sciences of heating ventilating, air-conditioning and refrigeration to serve humanity and promote a sustainable world.

Founded in 1915, the Association of Facilities Engineering (AFE), McLean, Virginia, is a professional organization of some 10,000 that promotes the optimal operation of plants, grounds and offices at Fortune 500 manufacturers, universities, medical centers, government agencies and innovative small firms from around the world. AFE provides education, certification, technical information and other relevant resources to plant and facility engineering, operation and maintenance professionals worldwide.

ASHRAE and AFE agree to support the Memorandum of Understanding to advance and promote the mutual interests of their respective members. We are committed to working together toward on the following activities and goals:

#### **CONSISTENT LEADERSHIP COMMUNICATION**

Recognizing the importance of communication in organizational collaboration, both organizations commit to hold a liaison meeting annually (either in person or via conference call) of designated ASHRAE/AFE senior representatives to:

- Ensure ongoing advancement of collaborative projects.
- Keep each respective organization informed of major initiatives.
- Discuss new opportunities for collaboration.

ASHRAE/AFE shall take responsibility for initiating the first annual liaison meeting. Action items with assigned responsibilities shall be recorded at each meeting.

#### **CONFERENCES AND MEETINGS**

Each organization agrees to provide the other with a meeting invitation and two complimentary VIP registrations to the primary annual meeting.

ASHRAE and AFE agree to explore opportunities to provide speakers at the other organization's meetings to help provide updates and perspectives on technologies and trends of mutual interest.

Where mutually beneficial, each organization shall help publicize the other organization's meetings and promote attendance.

## **CHAPTER COLLABORATION**

ASHRAE and AFE agree to coordinate promotion of joint grassroots meetings of respective members. Exchange of Chapter/Section leader contact information will be considered as one way to accomplish this objective.

## **ADVOCACY**

Where mutually beneficial and to the extent allowed by laws and corporate policies, ASHRAE and AFE agree to work together on common public affairs goals and ideologies. During annual liaison meetings, public affairs strategies will be discussed and common goals identified. Collaborative opportunities to be considered include:

- Joint promotion of codes and standards at the local, state and federal levels.
- Promoting mutually beneficial positions during the development and passage of state and federal legislation.
- Education of legislators on issues important to the members of each organization.

## **PUBLICATIONS**

Recognizing that electronic and print publications are a primary means of disseminating new technologies, trends and practices, ASHRAE and AFE agree to:

- Provide at least one complimentary subscription the primary membership periodical to be received at the headquarters location of the other organization.
- Explore opportunities to jointly produce publications of mutual benefit.
- Cross-market each organization's publications where appropriate and with industry standard distributor discounts.
- Use periodicals to promote the other organization's events, publications and other activities.

## **EDUCATION**

As leading providers of conventional and online educational services and in recognition of the vital role professional development has for our respective members, ASHRAE and AFE agree to:

- Cross-market educational offerings and the regional, national and international levels.
- Explore opportunities to co-develop new courses or other training programs that take advantage of overlapping and complimentary expertise between ASHRAE and AFE.
- Discuss ways that certifications programs can be jointly develop or administered.

## **TECHNICAL ACTIVITIES COORDINATION**

ASHRAE and AFE agree to foster technical cooperation in areas of common interest by:

- Encourage members in each organization to participate on technical committees and task forces.
- Provide opportunities to participate in and comment on proposed standards, guidelines, policies, and position statements developed on technical subjects as they relate to buildings and community developments.
- Establish liaison representatives to key technical committees where mutually beneficial to do so.

## RESEARCH

Recognizing the importance research plays in accelerating the transformation to a more sustainable built environment, ASHRAE and AFE agree to:

- Promote research in areas where research results will add to the body of knowledge in promoting a healthy, sustainable and efficient built environment.
- Disseminate research results quickly, focusing on high-impact findings.
- Identify opportunities for research funding from other sources.

## ADMINISTRATIVE CONTACTS

The administrative contacts for actions tied to this MOU shall be:

### For ASHRAE:

Jeff Littleton  
Executive Vice President  
ASHRAE  
1791 Tullie Circle NE  
Atlanta, GA 30320  
Tel: 404-636-8400  
Email: [jlittleton@ashrae.org](mailto:jlittleton@ashrae.org)

### For AFE:

Wayne P. Saya Sr., CPE  
Executive Director  
Association for Facilities Engineering  
8200 Greensboro Drive, Suite 400  
McLean, VA 22102  
Tel: 571-395-8777  
Email: [waynesaya@afe.org](mailto:waynesaya@afe.org)

## TERMINATION

Either party may terminate this MOU, with or without stated cause, upon providing the other party with thirty (30) days written notice of intent to terminate.

## TERM

The term of this Memorandum of Understanding shall begin when signed by both parties and shall terminate at the end of three (3) years unless extended at that time by written agreement.

## LEGAL STANDING

This MOU reflects a commitment by ASHRAE and AFE to continue and enhance their working relationship and individual efforts toward achieving mutual objectives described above. It does not create a binding obligation or agreement between the two organizations, and neither organization has an obligation to negotiate toward or enter into a binding written agreement. In addition, this MOU does

not create a partnership, joint venture, fiduciary relationship or similar relationship between ASHRAE and AFE. Furthermore, it is understood that this Memorandum of Understanding is conceived as a dynamic document, meant to change as circumstances and priorities warrant. It may be modified or amended by written agreement between both organizations.

**FOR ASHRAE**

\_\_\_\_\_  
David Underwood, President

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Jeff Littleton, Executive Vice President

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**FOR AFE**

\_\_\_\_\_  
Dennis M. Hydrick, President

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Wayne P. Saya, Executive Director

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date





## **Memorandum of Understanding**

### **ASHRAE And The International District Energy Association**

Founded in 1894, ASHRAE, Atlanta, Georgia advances the arts and sciences of heating ventilating, air-conditioning and refrigeration to serve humanity and promote a sustainable world.

Founded in 1909, the International District Energy Association (IDEA) works actively to foster the success of its members as leaders in providing reliable, economical, efficient and environmentally sound district heating, district cooling and cogeneration (also known as combined heat and power or CHP) services.

ASHRAE and IDEA agree to support this Memorandum of Understanding (MOU) to advance and promote the mutual interests of their respective members. To that end, the organizations are committed to working together toward achieving the following activities and goals:

#### **CONSISTENT LEADERSHIP COMMUNICATION**

Recognizing the importance of communication in organizational collaboration, both organizations commit to holding at least one liaison meeting annually (either in person or via conference call) of designated ASHRAE/IDEA senior representatives to:

- Ensure ongoing advancement of collaborative projects;
- Keep each organization informed of the other's major initiatives; and
- Discuss new opportunities for potential collaboration.

ASHRAE shall take responsibility for initiating the first annual liaison meeting. Action items with assigned responsibilities shall be recorded at each meeting by the hosting organization.

#### **CONFERENCES AND MEETINGS**

Each organization agrees to provide the other with a meeting invitation and two complimentary VIP registrations to its primary annual meeting.

ASHRAE and IDEA agree to explore opportunities to provide speakers at the other organization's meetings to help provide updates and perspectives on technologies and trends of mutual interest.

Where mutually beneficial, each organization shall help publicize the other organization's meetings and promote attendance.

## **ADVOCACY**

Where mutually beneficial and to the extent allowed by laws and corporate policies, ASHRAE and IDEA shall endeavor to work together to promote common public policies, goals and ideologies. During annual liaison meetings, common public policy strategies will be discussed and common goals identified. Examples of collaborative opportunities to be considered include:

- Joint promotion of codes and standards at the local, state and federal levels;
- Promoting mutually beneficial positions during the development and passage of state and federal legislation; and
- Education of local, state and federal legislators on issues of significance to the members of each organization.

## **PUBLICATIONS**

Recognizing that electronic and print publications are a primary means of disseminating new technologies, trends and practices, ASHRAE and IDEA agree to:

- Provide at least one complimentary subscription to the primary membership periodical to be received at the headquarters location of the other organization; [electronic or hardcopy?]
- Explore opportunities to jointly produce publications of mutual benefit;
- Cross-market each organization's publications where appropriate and with industry standard distributor discounts; and Use periodicals to promote the other organization's events, publications and other activities.

## **EDUCATION**

As leading providers of conventional and online educational services and in recognition of the vital role professional development has for our respective members, ASHRAE and IDEA agree, where appropriate, to:

- Cross-market educational offerings at the regional, national and international levels;
- Explore opportunities to co-develop new courses or other training programs that take advantage of the overlapping and complimentary expertise between ASHRAE and IDEA; and
- Discuss ways that certification programs can be jointly developed and/or administered.

## **TECHNICAL ACTIVITIES COORDINATION**

ASHRAE and IDEA agree to foster technical cooperation in areas of common interest by:

- Encouraging members in each organization to participate on technical committees and task forces providing opportunities to participate in and comment on proposed standards, guidelines, policies, and position statements developed on technical subjects as they relate to buildings and community developments; and
- Establishing liaison representatives to key technical committees where mutually beneficial to do so.

## **RESEARCH**

Recognizing the importance research plays in accelerating the transformation to a more sustainably built environment, ASHRAE and IDEA agree to:

- Promote research in areas where research results will add to the body of knowledge in district energy;
- Disseminate research results quickly, focusing on high-impact findings and
- Identify opportunities for research funding from other sources.

## **ADMINISTRATIVE CONTACTS**

The administrative contacts for actions tied to this MOU shall be:

### **For ASHRAE:**

Jeff Littleton  
Executive Vice President  
ASHRAE  
1791 Tullie Circle NE  
Atlanta, GA 30320  
Tel: 404-636-8400  
Email: [jlittleton@ashrae.org](mailto:jlittleton@ashrae.org)

### **For IDEA:**

Robert P. Thornton  
President and CEO  
International District Energy Association  
24 Lyman Street, Suite 230  
Westborough, MA 01581  
Tel: 612-607-4544  
Email: [rob.idea@districtenergy.org](mailto:rob.idea@districtenergy.org)

## **TERMINATION**

Either party may terminate this MOU, with or without stated cause, upon providing the other party with thirty (30) days written notice of intent to terminate.

## **TERM**

The term of this Memorandum of Understanding shall begin when signed by both parties and shall terminate at the end of three (3) years unless extended at that time by written agreement.

## **LEGAL STANDING**

This MOU reflects a mutual commitment by ASHRAE and IDEA to enhance their working relationship and individual member efforts toward achieving mutual objectives described above. This MOU does not create a binding obligation or agreement between the two organizations, and neither organization has any obligation to negotiate toward or enter into any binding written agreement or other commitment. In addition, this MOU does not create a partnership, joint venture, fiduciary relationship or any similar relationship between ASHRAE and IDEA. Furthermore, it is understood that this MOU is conceived as a dynamic document, meant to change as circumstances and priorities warrant, and therefore may be modified or amended by written agreement between both organizations.

**FOR ASHRAE**

\_\_\_\_\_  
David Underwood, President

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Jeff Littleton, Executive Vice President

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**FOR IDEA**

\_\_\_\_\_  
Bruce Ander, Chair

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Robert P. Thornton, President and CEO

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date



## Memorandum of Understanding

**ASHRAE  
And  
ORGANIZATION NAME**

Founded in 1894, ASHRAE, Atlanta, Georgia advances the arts and sciences of heating ventilating, air-conditioning and refrigeration to serve humanity and promote a sustainable world.

Founded in 1914, APPA, "Leadership in Educational Facilities" supports educational excellence with quality leadership and professional management through education, research, and recognition.

ASHRAE and APPA agree to support the Memorandum of Understanding to advance and promote the mutual interests of their respective members. We are committed to working together on the following activities and goals:

### CONSISTENT LEADERSHIP COMMUNICATION

Recognizing the importance of communication in organizational collaboration, both organizations commit to hold a liaison meeting annually (either in person or via conference call) of designated ASHRAE/APPA senior representatives to:


- Ensure ongoing advancement of collaborative projects.
- Keep each respective organization informed of major initiatives.
- Discuss new opportunities for collaboration.


ASHRAE/APPA shall take responsibility for initiating the first annual liaison meeting. Action items with assigned responsibilities shall be recorded at each meeting. The parties responsible for ensuring this MOU is actively pursued through the term of the agreement are:

**For ASHRAE:**

\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_

**For APPA:**

  
\_\_\_\_\_  
Peter Strazdas, President

  
\_\_\_\_\_  
E. Lander Medlin, EVP

## **CONFERENCES AND MEETINGS**

Each organization agrees to provide the other with a meeting invitation and two complimentary VIP registrations to the primary annual meeting.

ASHRAE and APPA agree to explore opportunities to provide speakers at the other organization's meetings to help provide updates and perspectives on technologies and trends of mutual interest.

Where mutually beneficial, each organization shall help publicize the other organization's meetings and promote attendance.

## **CHAPTER COLLABORATION**

ASHRAE and APPA agree to coordinate promotion of joint grassroots meetings of respective members. Exchange of Region/Chapter/Section leader contact information will be considered as one way to accomplish this objective.

## **ADVOCACY**

Where mutually beneficial and to the extent allowed by laws and corporate policies, ASHRAE and APPA agree to work together on common public affairs goals and ideologies. During annual liaison meetings, public affairs strategies will be discussed and common goals identified. Collaborative opportunities to be considered include:

- Joint promotion of codes and standards at the local, state and federal levels.
- Promoting mutually beneficial positions during the development and passage of state and federal legislation.
- Education of legislators on issues important to the members of each organization.

## **PUBLICATIONS**

Recognizing that electronic and print publications are a primary means of disseminating new technologies, trends and practices, ASHRAE and APPA agree to:

- Provide at least one complimentary subscription the primary membership periodical to be received at the headquarters location of the other organization.
- Explore opportunities to jointly produce publications of mutual benefit.
- Cross-market each organization's publications where appropriate and with industry standard distributor discounts.
- Use periodicals to promote the other organization's events, publications and other activities.
- Explore mutually beneficial ways to translate ASHRAE publications into Spanish and French for distribution in Mexico and Canada, respectively.

## EDUCATION

As leading providers of conventional and online educational services and in recognition of the vital role professional development has for our respective members, ASHRAE and APPA agree to:

- Cross-market educational offerings at the chapter, regional, national and international levels.
- Explore opportunities to co-develop new courses or other training programs that take advantage of overlapping and complimentary expertise between ASHRAE and APPA.
- Discuss ways that certification programs can be promoted, jointly developed, or administered.
- Cooperate to provide real world education and experience for University students in energy audit and assessment leading to a Building Energy Quotient (bEQ) rating.

## TECHNICAL ACTIVITIES COORDINATION

ASHRAE and APPA agree to foster technical cooperation in areas of common interest by:

- Encourage members in each organization to participate on technical committees and task forces.
- Provide opportunities to participate in and comment on proposed standards, guidelines, policies, and position statements developed on technical subjects as they relate to buildings and community developments.
- Establish liaison representatives to key technical committees where mutually beneficial to do so.
- Work together to co-author a standard on Total Cost of Ownership (TCO)
- Explore opportunities to work together to enhance the operation and maintenance of facilities.

## RESEARCH

Recognizing the importance research plays in accelerating the transformation to a more sustainable built environment, ASHRAE and APPA agree to:

- Promote research in areas where research results will add to the body of knowledge in TCO (Total Cost of Ownership), Energy & Sustainability, Key Performance Indicators & Metrics; and Facilities Management Standards
- Disseminate research results quickly, focusing on high-impact findings.
- Identify opportunities for research funding from other sources.

## ADMINISTRATIVE CONTACTS

The administrative contacts for actions tied to this MOU shall be:

### For ASHRAE:

Jeff Littleton  
Executive Vice President  
ASHRAE  
1791 Tullie Circle NE  
Atlanta, GA 30320

### For APPA:

E. Lander Medlin  
Executive Vice President  
APPA  
1643 Prince Street  
Alexandria, VA 22314

Tel: 404-636-8400  
Email: [jlittleton@ashrae.org](mailto:jlittleton@ashrae.org)

Tel: 703-684-1446  
Email: [lander@appa.org](mailto:lander@appa.org)

**TERMINATION**

Either party may terminate this MOU, with or without stated cause, upon providing the other party with thirty (30) days written notice of intent to terminate.

**TERM**

The term of this Memorandum of Understanding shall begin when signed by both parties and shall terminate at the end of three (3) years unless extended at that time by written agreement.

**LEGAL STANDING**

This MOU reflects a commitment by ASHRAE and APPA to continue and enhance their working relationship and individual efforts toward achieving mutual objectives described above. It does not create a binding obligation or agreement between the two organizations, and neither organization has an obligation to negotiate toward or enter into a binding written agreement. In addition, this MOU does not create a partnership, joint venture, fiduciary relationship or similar relationship between ASHRAE and APPA. Furthermore, it is understood that this Memorandum of Understanding is conceived as a dynamic document, meant to change as circumstances and priorities warrant. It may be modified or amended by written agreement between both organizations.

**FOR ASHRAE**

\_\_\_\_\_  
Printed Name/Title

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date


\_\_\_\_\_  
Printed Name/Title

\_\_\_\_\_  
Signature

**FOR APPA**

**Peter Strazdas/ President**

Printed Name/Title



\_\_\_\_\_  
Signature

**January 18, 2016**

Date

**E. Lander Medlin/ EVP**

Printed Name/Title



\_\_\_\_\_  
Signature



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Date

**January 18, 2016**  
Date

Report to ASHRAE ExCom  
on the  
DiscoverE (formerly National Engineers Week) 2015 Fall Steering Committee Meeting  
from Don Colliver 11/19/2015

The meeting was held in Washington DC at the Capital Hilton on November 18, 2015. Don Colliver attended on behalf of ASHRAE. Approximately 40 people from the sponsoring societies, industry sponsors, and Diversity Council members were in attendance.

Other than standard operating issues a few key issues and/or new items discussed that may be of interest to ExCom include:

- The program is financially stable. Financial decisions are under the control of the DiscoverE Board of Directors who consist of NSPE board members, and current and recent past E-Week society sponsors. A recent grant from the Bechtel Foundation has enabled the hiring of two additional staff. The total DiscoverE staff is now seven FTE. The Operating Policies and Procedures for the Steering Committee and Diversity Council were adopted. (See Attachment A). A copy of the Board of Directors Policies and Procedures and a summary of the financial statements will be available from ASHRAE staff (Littleton/Thomson) when they become available within the next few weeks.
- The 2015-2016 campaign is being led by AIAA, SAE and Boeing. This will be the 100<sup>th</sup> anniversary of Boeing. This is the 65<sup>th</sup> anniversary for “Engineers Week”.
- **Global Day of the Engineer** - A major push from AIAA, SAE and Boeing this year is to introduce a new program - the “Global Day of the Engineer” to be held on February 24, 2016. A description of this program is in Attachment B. The concept is that the US currently has a celebration of the engineer but other countries are wanting to do this as well. This program is meant to tie these celebrations together and is being encouraged by UNESCO. The theme this year is “Engineers Make a World of Difference”. See [www.DiscoverE.org/GlobalDay](http://www.DiscoverE.org/GlobalDay).
- **DiscoverE Programs and Growth** – The rebranding effort (started in 2014) has produced growth – both in contacts (25,000 volunteers), communications, and staffing (currently seven people). Other new items include: received a new UEF grant to develop educator trainings, developed downloadable EWEEK ads, and the Future Cities competition has gone international (China, UK and Egypt). They are trying a new social media campaign (Thunderclap) which greatly expands the impact on social media. The social media and planning calendars were distributed. The calendars indicated a lot of communication which was to be pushed out by the societies to their members. There was a lot of discussion of how to distribute the DiscoverE material and the amount of material that’s coming out of DiscoverE – in particular how can we distribute the information so frequently without diluting the information from the Society? Nothing was resolved other than if we have suggestions please pass it on to them.
- **ASHRAE Participation Summary** - A summary of how ASHRAE is participating in the various DiscoverE programs is:
  - New Faces
    - Nominations have been submitted.
    - Winners will be publicized in professional magazines by DiscoverE.
  - Engineers Week
    - Brochures to be included in communication at ASHRAE Winter Conference
    - Scheduled to be included in Student Member Newsletter
    - Scheduled to feature on Facebook in December and January

- Girl Day
  - Communication to all female members and through K-12 Subcommittee to encourage involvement at a local level
  - Scheduled to feature on Facebook in December and January
- Future City
  - Communication to all members about regional competitions
  - General call to members in DC and Baltimore area to act as mentors and judges
- Global Marathon
  - Communication to ASHRAE chapters to encourage promotion on a local level
  - Push information on social media and in Student Member Newsletter
- **Dream Big** - ASCE/Betchel/DiscoverE are pulling together a major outreach education program, entitled “Dream Big” promoting all fields of engineering. The cornerstone of this project is a 42-minute IMAX film to be rolled out during eWeek 2017. This will be supported with “project based activities” (52 Weeks of Engineering Activities), webisodes and other outreach activities. They will be reaching out to the partner societies for help with involving student branches, getting high resolution photos and video material for the webisodes, and activities to be used in the Activities Booklet and on the DiscoverE webpage ([www.discovere.org/our-activities](http://www.discovere.org/our-activities)). A questionnaire about how each of the partnering societies could/would participate was distributed.

**AI-1:** Determine the extent of ASHRAE participation in the Dream Big program, activities that may be developed, examples/pictures/stories about exciting things that ASHRAE professionals are doing (e.g. designing sustainable buildings), and respond back to ASCE by completing the questionnaire (Student Activities / Thomson)

- **ABET** – A presentation was made by ABET staff (Charles [Chuck] Hickman, Managing Director, Constituent Relations / Rochelle Williams, Director, Programs and Events) about the changes that are being proposed to the ABET Accreditation criterion (See <http://www.abet.org/wp-content/uploads/2015/10/E001-16-17-EAC-Criteria-10-20-15.pdf>)
  - Some of the current criteria are vague – in particular those related to: multidisciplinary teams, professional and ethical responsibility, understanding solutions in a global economic and social context, life-long learning, knowledge of contemporary issues. These soft skills are things which are hard to measure and evaluate. This results in inconsistent interpretation in evaluating schools.
  - Proposed changes are out for public comment now. The changes appear to de-emphasize criteria for business skills and soft skills.
  - Comments are being requested on the proposed changes. These can be made at: <https://www.surveymonkey.com/r/CRIT35R2>
  - Chuck Hickman from ABET indicated that he would welcome invitations to meet with engineering societies to discuss these changes and how the programs are evaluated.

**AI-2:** Consider inviting Mr Hickman to come to the ASHRAE Meeting in Orlando to discuss the changes with the ABET Accreditation subcommittee and others that may be interested. (Student Activities Committee)

- **DiscoverE Society Sponsorship:** ASCE was selected to be 2017 Organization Sponsor. Lead Societies have been selected through 2017. ASHRAE was a sponsor in 2003 and 2011. It may want to consider proposing a date for future sponsorship.

**AI-3:** ASHRAE should be considering about the next time it would like to be the Organization Sponsor. (Ex-Com)

**ASHRAE Action Items from Meeting (in addition to standard operating items):**

- AI-1 Determine the extent of ASHRAE participation in the Dream Big program, activities that may be developed, examples/pictures/stories about exciting things that ASHRAE professionals are doing (e.g. designing sustainable buildings), and respond back to ASCE by completing the questionnaire (Student Activities / Thomson)
- AI-2 Invite Mr Hickman to come to the ASHRAE Meeting in Orlando to discuss the changes with the ABET Accreditation subcommittee and others that may be interested.
- AI-3: ASHRAE should be considering about the next time it would like to be the Organization Sponsor. (Ex-Com)

## **DiscoverE Steering and Staff Committee Operating Policies and Procedures**

1. **Purpose.** The DiscoverE Steering and Staff Committee is a group of engineering societies and public agency partners who guide development and implementation of DiscoverE programs and resources and engage DiscoverE volunteers.
2. **Membership Fee.** Each society represented on the DiscoverE Steering and Staff Committee shall pay an annual membership fee. The annual membership fee for 2016 shall be \$15,900 per society. This fee may be increased on an annual basis.
3. **2016 Steering Committee Members.** The societies represented on the DiscoverE Steering and Staff Committee for 2016 shall include:
  - a. American Council of Engineering Companies
  - b. American Institute of Aeronautics and Astronautics
  - c. American Institute of Chemical Engineers
  - d. American Society of Agricultural and Biological Engineers
  - e. American Society of Civil Engineers
  - f. ASHRAE
  - g. American Society of Mechanical Engineers
  - h. DiscoverE Diversity Council
  - i. IEEE-USA
  - j. Institute of Industrial Engineers
  - k. National Society of Professional Engineers
  - l. National Council of Examiners for Engineering and Surveying
  - m. SAE International
  - n. SME Education Foundation
  - o. Society of Petroleum Engineers
4. **DiscoverE Steering and Staff Committee Meeting Schedule.** The DiscoverE Steering and Staff Committee shall conduct two in-person meetings each year and shall conduct all other committee business through email, webinar, or teleconference.
5. **DiscoverE Board of Directors.** The DiscoverE Steering and Staff Committee shall elect three representatives to serve on the DiscoverE Board of Directors. Steering and Staff Committee- elected representatives shall serve no more than three (3) consecutive one-year terms. In the event that a Steering and Staff Committee- elected representative is unable to serve or complete the term, the Steering and Staff Committee shall replace the representative by a majority vote of the DiscoverE Steering and Staff Committee.

## 1. ABOUT GLOBAL DAY OF THE ENGINEER

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### ❖ **WHEN**

**Wednesday, February 24, 2016**, will be the first Global Day of the Engineer.

### ❖ **WHAT**

With the theme “*Engineers Make a World of Difference*” engineers everywhere unite in celebration and volunteerism. Global Day is THE movement to ensure people everywhere know that engineers make the world a better place and to inspire future generations of innovators.

### ❖ **WHY A DAY FOR ENGINEERS**

Engineers have enormous responsibility in defining how we live on this shared planet. They are at the forefront of solving issues around food, water and energy sustainability, as well as transportation and communications.

In most parts of the world engineers are desperately needed. It is imperative to:

- Elevate the conversation around the need for engineering and technology professionals;
- Unite the engineering community to address education and work force needs; and,
- Put a face to the people – engineers – who serve humanity.

Various countries celebrate their own Engineer Days or Weeks, but Global Day brings together **all** engineers everywhere to underscore the profession’s universal impact. Global Day is based on the successful collaboration model and widely adopted programs of DiscoverE in the United States. DiscoverE founded Engineers Week, Introduce a Girl to Engineering Day, and other programs embraced around the globe.

### ❖ **GLOBAL DAY PARTNERS**

DiscoverE and co-organizers The Boeing Company, SAE International, and the American Institute of Aeronautics and Astronautics (AIAA) are calling on engineering employers, universities, governments, and associations around the world to become partners and participate in Global Day of the Engineer 2016. Organizers will provide widely adaptable online tools and resources.

Partners will receive adaptable online tools and resources and be asked to:

- Help identify and foster a few local activities/events in communities around the world to celebrate engineering and inspire young students;
- Share engineering innovations on social media; and
- Promote Global Day of the Engineer.

There is no fee to participate, but sponsorship opportunities are available. Sponsorships will help create necessary resources, tools, and momentum. Sponsorship offers elevated visibility for organizations to show the world their commitment to the future of engineering.

Please help build worldwide awareness and support for Global Day of the Engineer and for the engineering profession now and in the future.

## 2. PARTNERSHIP OPPORTUNITIES

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You're invited to join the Global Day movement. Sign on to the pledge list to highlight your support of the engineering profession.

### ❖ **ORGANIZING AND CONTENT PARTNERS**

DiscoverE, The Boeing Company, AIAA, and SAE International will be responsible for providing Global Day tools and resources. The virtual global headquarters will be found at [www.DiscoverE.org](http://www.DiscoverE.org). Design Squad Global – an online community that connects kids with peers from around the world – will launch with Global Day.

### ❖ **PATRON (*IN PROGRESS*)**

UNESCO (United Nations Educational, Scientific, and Cultural Organization) will help Global Day build alliances and reach.

### ❖ **ORGANIZATIONAL PARTNER**

Make a difference. Become an Organizational Partner! Organizational Partners are governmental bodies such as ministries and non-governmental organizations such as multinational associations, professional societies, corporations, and universities.

National Organizational Partners are organizations with a presence in one country and employees or members in more than one location.

An organization commits to co-branding with Global Day, generating events, and promoting the day widely. DiscoverE will promote online news of your Global Day contribution!

Pledge to:

1. Celebrate! Generate events at various sites or connect your established activities to Global Day. These include celebrations of engineering, such as public lectures and awards announcements, or demonstrations for young students. Post all on our events calendar.
2. From various sites, identify local engineering achievements and share on social media with the #GlobalEngineer hashtag. These can range from large

structures to community-based humanitarian solutions.

- 3 Promote Global Day engagement to employees, members and university engineering students through social media with the #GlobalEngineer hashtag. Also use newsletters, member blasts, and post the Global Day logo (with hyper link to Global Day website) on your organization's Web site home page.

Interested in more?

- Invite additional organizational partners such as clients, suppliers, and affinity organizations to participate and sign the pledge roster and help build Global Day of the Engineer awareness and participation.
- Attend a planning teleconference facilitated by DiscoverE, Boeing, AIAA, and SAE International to develop and share plans.

### ❖ **INDIVIDUAL PARTNERS AND THE POWER OF ONE**

Individual engineers and local groups such as primary schools and youth clubs are critical to the success of Global Day of the Engineer. They deliver engineering experiences to parents, educators, and children; put a 'face' and personality to engineering; and celebrate engineers' accomplishments and future.

Individuals select a way to participate from the list below, sign the pledge roster, and post their action(s) on the Global Day online calendar.

Pledge to:

1. Celebrate by organizing a coffee meeting or talking to a civic group. We have more ideas.
2. Share a local achievement via social media. Tweet a photo and tag it with the #GlobalEngineer hashtag.
3. Do hands-on activities with young students – see ours or create your own.

### 3. [ABOUT THE ORGANIZING AND CONTENT PARTNERS](#)

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**DISCOVERE** is a non-profit organization dedicated to celebrating engineers as well as mobilizing, supporting and connecting volunteers reaching young students about engineering education and careers.

**THE BOEING COMPANY** is the world's largest aerospace company and leading manufacturer of commercial jetliners and defense, space and security systems. A top U.S. exporter, the company supports airlines and U.S. and allied government customers in 150 countries. Boeing products and tailored services include commercial and military aircraft, satellites, weapons, electronic and defense systems, launch systems, advanced information and communication systems, and performance-based logistics and training.



**AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS** is the largest aerospace professional society in the world, serving a diverse range of more than 30,000 individual members from 88 countries, and 95 corporate members. AIAA members help make the world safer, more connected, more accessible, and more prosperous. For more information, visit [www.aiaa.org](http://www.aiaa.org), or follow us on Twitter [@AIAA](https://twitter.com/AIAA).

**SAE INTERNATIONAL** is a global association of more than *138,000 engineers and related* technical experts in the aerospace, automotive and commercial-vehicle industries. SAE International's core competencies are life-long learning and voluntary consensus standards development. SAE International's charitable arm is the SAE Foundation, which supports many programs, including A World In Motion® and the Collegiate Design Series.

**DESIGN SQUAD GLOBAL** is an online community that connects kids with peers from around the world, providing hands-on engineering activities, design challenges, and streaming videos designed to increase kids' understanding of engineering.

*Because engineers solve the world's toughest problems...*

## Center for Building Innovation

education . innovation . acceleration

**Vision:** To significantly accelerate the development and scalable deployment of advanced building design practices, systems and technologies that support visionary sustainable communities.

### Educate

Create the preeminent educational, training and networking resource for the full spectrum of building professionals.

- CBI Training Center – High-capacity, state-of-the-art learning and training facility
  - Distance/eLearning projection systems to deliver educational content globally.
  - Live and interactive learning systems
  - Studios for recording eContent
  - Interactive lab spaces specifically designed to inspire innovation in building design
- Low-energy HVAC System Design and Innovation curriculum development and training
- High-Performance K-16 Schools Initiative – Young minds and buildings intersect at K-12 Schools. Future leaders and buildings intersect at colleges and universities. That convergence creates unique opportunities to use buildings as learning tools.
  - High-Performing and Net-Zero School Design Guides
  - NZE Schools Case Study Database and Online Resources Portal
  - Student engagement learning labs (health, energy, life-cycle costs)
- Development of off-the-shelf building-centric university curriculum to better prepare engineering graduates for careers in building design
- Train-the Trainers
  - Technician training workshops
  - Building operations training workshops
  - K-12 teacher building module training and resources
    - Scholarship support for teach-the-teachers

## **Innovate**

Research, create and document interdisciplinary tools and systems for designers that support the creation of high-performing and net-zero energy buildings.

- Next-generation eToolkits for building design professional – online, free. Building the BEST (Building Engineer Software Toolkits<sup>®</sup>)
  - Standard 90.1 compliance tools
  - Cost estimators
  - Energy modeling tools and techniques
  - Autodesk Collaboration – Building Design Suite templates
- Accelerate the pace of building systems research (i.e. Optimizing energy efficiency of systems using low GWP refrigerants)
- Launch the Global Building Research Portal
- Launch the Built Environment Research ThinkTank conference where the best and brightest convene to imagineer tomorrow's sustainable buildings
- Refrigeration Without Borders -- Research into next generation, low-cost, mass-producible, sustainable refrigeration systems that can reduce food and medicine wastes (transportation and storage) in developing economies.

## **Accelerate**

Accelerate the development and adoption of next-generation codes and standards, creating a roadmap to a more sustainable built environment.

- Reduce the development time of consensus, code-intended standards that drive building innovation and performance
- Global Standards Harmonization
- Performance or Outcome-based Standards



Shaping Tomorrow's  
Built Environment Today

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Date: September 16, 2015

To: Board of Directors

Subject: Strategic Assignments for DRCs not Assigned as ExOs

All Directors (DRC's) not assigned as ExO's to Standing Committees are to receive strategic assignments for assessing ways to look at outside factors that may affect the future direction of ASHRAE.

These assignments are the following:

1. Doug Cochrane and Edward Tsui: MOU tracking and organization. We currently have in excess of 30 MOUs with other organizations. These documents, if followed, are done so in a haphazard manner. Strategically we need to assess an order of magnitude and importance to ASHRAE and appropriate Board assignments to fulfill MOU obligations. A reporting mechanism to the Board needs to be developed.
2. Karine Leblanc and Keith Yelton: Chapter educational offerings require a strategic assessment to determine the best delivery mechanisms for chapter use. This needs to be coordinated with the Ad Hoc on Chapter Volunteerism & Engagement as well as the Austin report to Members Council last year.
3. Mark Miller and Larry Fisher: IAQA liaison for assuring mutually satisfactory strategies.
4. Bill Klock and Rick Zbin: Implementation strategy for Presidential ad hoc "Effective Use of Volunteer Time".
5. Bill Walter, Farooq Mehboob and Jennifer Isenbeck: Connecting chapters, regions and society.

I have sent each group of directors (DRCs) a more detailed outline of their anticipated activities.

A handwritten signature in black ink, appearing to read "T. David Underwood".

T. David Underwood  
President

TDU/cin

**MOU Tracking and Organization  
Review on Dec 2015**

**CONTENT OF THE REPORT:**

1. MOU Review
2. Discussion and Suggestion
3. Conclusion

**1.0 MOU REVIEW**

ASHRAE has a total of 36 signed Memoranda of Understanding (MOU). Each MOU varies in strategic importance to ASHRAE. In order to have a better overview, we try to review the MOUs in details according to the following aspect,

1. Geographical distribution of the MOU
2. Categories distribution
3. Common interest distribution
4. Term period of the MOU
5. Committed annual meeting in the MOU
6. Global collaboration

**1.1 MOU Review: Geographic distribution**

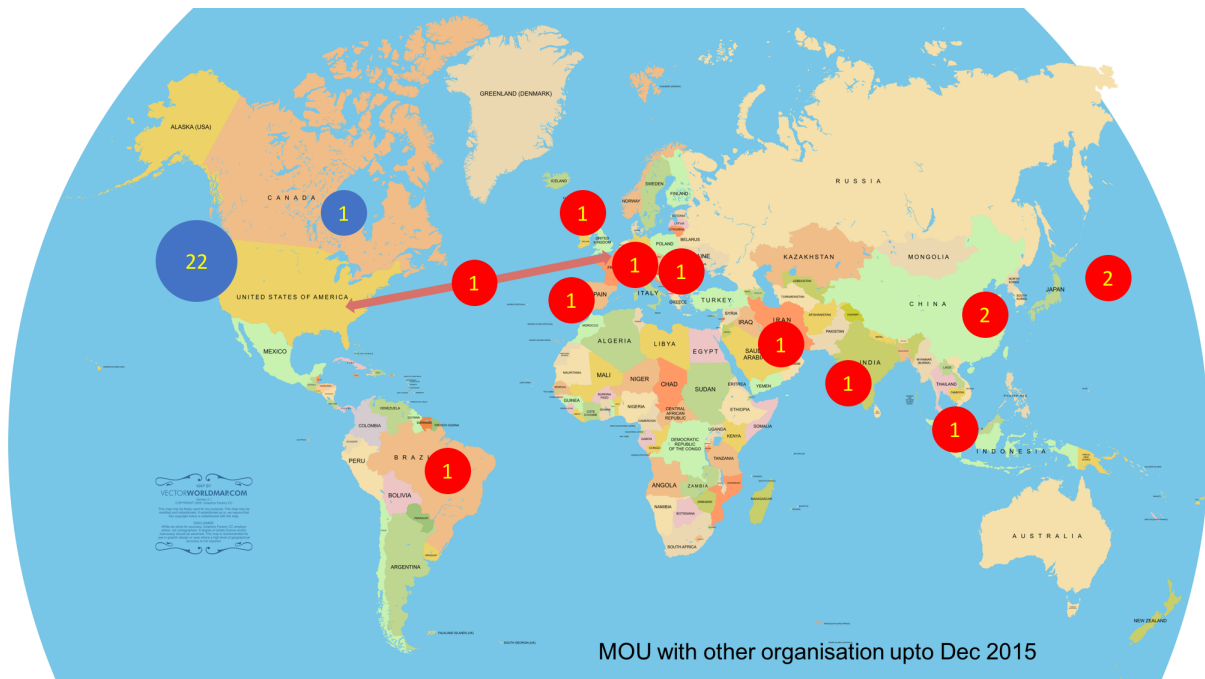
Upto Dec 2015, ASHRAE signed 36 MOUs with various organizations.

- (13) MOUs were signed with organizations located in countries outside North America. And one of the MOU was signed with REHVA, which represents 30 member countries;
- (1) MOU was signed with organization located in Canada;
- (22) MOUs were signed with US organization/government agency.

If we look at those MOU vs ASHRAE regions, we have,

- (1) MOU is related to Region XII;
- (5) MOUs are related to 3 countries in Region XIII;
- (7) MOUs are related to countries in RAL.

Below is the geographic distribution.



## 1.2 MOU Review: Categories distribution

Most of the MOUs/organization involve built environment, and here we would like categorizing them into the following.

- (4) MOU/organization are **Green building** related;
- (2) MOU/organization are **IEQ/IAQ** related;
- (2) MOU/organization are **Refrigeration** related;
- (4) MOU/organization are **Building Operation** related;

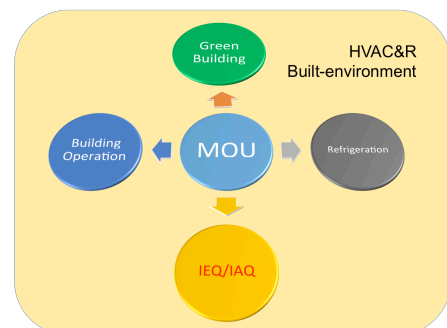
And we have the list of organization as followings,

### 1.2.1 Green building related:

- Canada Green Building Council (CaGBC)
- Green Building Council Brasil
- Green Building Initiative (GBI)
- Indian Green Building Council (IGBC)

### 1.2.2 IEQ/IAQ related:

- Indoor Environment Quality Global Alliance (IEQ-GA)
- National Air Filtration Association (NAFA)



### 1.2.3 Refrigeration related:

- Global Cold Chain Alliance (GCCA)
- International Institute of Ammonia Refrigeration (IIAR)

### 1.2.4 Building operation related:

- Association of Higher Education Facilities Officers (APPA)
- Building Owners and Managers Association (BOMA)
- Facility Guidelines Institute (FGI)
- International Facility Management Association (IFMA)

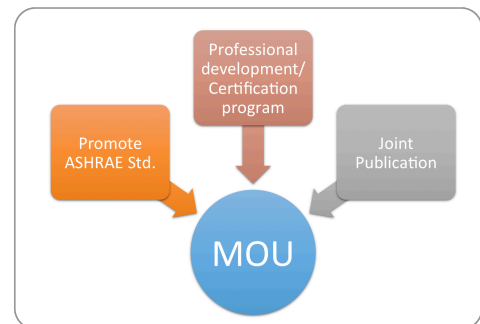
## 1.3 MOU Review: Common interest distribution

In the 36 signed MOUs, we definitely have some common interest with those organisation. And there are some major common interest which may affect our implementation plan and we may be benefit from it. They are,

- Agree to collaborate in Professional development/Certification program;
- Promote ASHRAE Standard/Code;
- Explore joint publication.

### 1.3.1 Professional development/Certification program related:

(15) MOUs/organisation agreed to jointly promote Professional development and/or certification program.



### 1.3.2 ASHRAE Standard/Code related:

(12) MOUs/organization agreed to promote or promote adoption ASHRAE standard /code.

### 1.3.3 Joint Publication related:

(8) MOU/organization are interested to explore the opportunity in developing joint publication.

## 1.4 MOU review: Term period of the MOU

Majority of the MOUs either do not have an expiry date, or automatically renew and only (11) MOUs showed an expiry date. And,

- (7) of them are either expired or to be expired with 2015-16 Society year, and
- (2) MOUs will be expired in 2016-17 Society year.
- (2) MOUs will be expired in 2017-18 Society year.

### 1.4.1 List of the MOUs either expired or to be expired with 2015-16 Society year,

- American Institute of Architects (AIA)
- Council of American Mechanical and Electrical Engineers, (CAMEE)

- Greater Philadelphia Innovation Cluster (GPIC)
- Indian Green Building Council (IGBC)
- Indoor Environment Quality Global Alliance (IEQ-GA)
- International Association of Plumbing and Mechanical Officials, Inc. (IAPMO)
- National Association of State Energy Officials, (NASEO)

- 1.4.2 List of the MOUs will be expired with 2016-17 Society year,
- International Institute of Ammonia Refrigeration (IIAR)
  - National Air Filtration Association (NAFA)

- 1.4.3 List of the MOUs will be expired with 2017-18 Society year,
- Chartered Institute of Building Services Engineers (CIBSE)
  - United States Department of Energy (DOE)

### **1.5 MOU Review: Committed meeting in the MOU**

Collaboration needs continuous communication and better understanding.

- (9) MOUs agree offering complimentary VIP registration to each organization's primary annual meeting
- (1) MOU/organization agree to provide the other with a meeting invitation to the primary annual meeting
- (13) MOUs commit to hold a liaison meeting annually.

### **1.6 MOU Review: Global collaboration**

Apart from the (13) MOU signed with countries outside North America, there are (5) MOUs/organisation who provide potential international collaboration.

- Building Owners and Managers Association (BOMA)
- Clinton Climate Initiative of the William J. Clinton Foundation (CCI) (WJCF)
- International Facility Management Association (IFMA)
- International Institute of Ammonia Refrigeration (IIAR)
- National Air Filtration Association (NAFA)

## **2.0 DISCUSSION AND SUGGESTION:**

After reviewed the 36 MOUs, there is an immediate action we have to take, which is to extend the (7) MOUs which either was expired or is going to expired in this Society year, if needed. Also, the MOU signed with REHVA (Federation of European Heating and Air-Conditioning Association) was found without a date, which need clarification.

.....Would suggest EVP, Jeff, to help taking the action.

Apart from the term period of the MOU, there are 2 MOU we might want to clarify as well.



- Practice, Education, Research for Sustainable Infrastructure (PERSI) MOU shows only ASHRAE and American Society of Civil Engineers signed the agreement.
- MOU with Greater Philadelphia Innovation Cluster (GPIC), we need to clarify whether we get the agreed appointment.

.....Would suggest EVP, Jeff, to help taking the action.

All (36) MOUs are important to ASHRAE in various extents. In order to manage them effectively, priority those MOU is important and necessary. Our list priorities obviously has to connect to the latest Strategic Plan and the long term goal. This is also the process to identify our partner organisation so that ASHRAE can work with them during implementing our strategic plan.

First of all, when we categorize those MOU/organisation, we can group those organization with same category together (eg Green Building and Building Operation) so that Board can appoint the same officer to manage them. On the other hand, we find that only (1) MOU/organisation is related to Residential issue, which is American Institute of Architects (AIA). The Board might want to identify some other organisation in residential to work with in the future.

“Green Building” associates with Std 90.1 & 189.1 and “IAQ/IEQ” associates with Std 62.1, 62.2 & 55. “Building Operation” will obviously correlate to not only above Std but also Std 180 etc. Those organisation will definitely a good/potential good partner to us, either in potential membership or “product” development and revenue improvement.

.....Suggest to appoint 3 VPs to follow those MOU/organisation.

Secondly, we sort those MOU according to common interest as ASHRAE. There are (15) MOU/organisation showing interest to collaborate in either Professional development or Certification program. This is a significant reference for us to further develop and implement our ASHRAE certification program.

Besides, there are (12) MOU/organisation show potential in either cooperation or adoption of ASHRAE standard/code. This is an unique reference for us to identify partner organisation in promoting ASHRAE standard, which may help us increasing revenue by selling our publication.

.....Would suggest President Elect, Tim, to develop a matrix in working with those organisation regarding ASHRAE Std, Professional development and ASHRAE Certification.

Lastly, we have to look at MOU in the global aspect. There are (13) MOU were signed with organisations located in countries outside North America. (22) MOU were signed with organisation from US and (1) from Canada. In long term, the Board might have to consider handling those MOU/organisation outside North America separately due to their needs are different from those located in US/Canada. A similar format of MOU and implementation plan will assist us to work with partner organisation outside North America.

However, we also realize that chapter/section/group exist in some of the MOU/organisation “countries”. Do we connect those MOU/organisation well with the related Region/chapter?

.....Would suggest current Treasurer, Bjarne, and to follow up the Globalization strategy.

*MOU/organisation (outside North America) vs ASHRAE Region/chapter:*

	ASHRAE Region	no of MOU	ASHRAE chapter in the country (chapter no)
Japan	Region XIII	2	Yes (194)
China	Region XIII	2	No. But 2 ASHRAE Group. ASHRAE-CAR Beijing group ASHRAE-CAR Shanghai group
Singapore	Region XIII	1	Yes (142)
Brasil	Region XII	1	Yes (172)
Spain	RAL	1	Yes (182)
Kuwait	RAL	1	Yes (164)
Serbian	RAL	1	No.
UK	RAL	1	No. But 1 Section & the CIBSE-ASHRAE group.
India	RAL	1	Yes (158)
Europe (REHVA)	RAL	1	
Indoor Environment Quality Global Alliance (IEQ-GA) (US/Europe – Alliance)		1	

On top of this, there are (5) MOU/organization might be the potential partner organization for us to work with in the global development, due to their international involvement. They are,

- Building Owners and Managers Association (BOMA)
- Clinton Climate Initiative of the William J. Clinton Foundation (CCI) (WJCF)
- International Facility Management Association (IFMA)
- International Institute of Ammonia Refrigeration (IIAR)
- National Air Filtration Association (NAFA)

.....Would suggest current VP, Walid, to help Bjarne investigate the benefit in working with them in our Globaliazation map.

## **CONCLUSION:**

Those (36) are important asset to ASHRAE. However, the importance is how can we connect them well and dip out the treasure. Target is to reach a win-win situation.

Instead of follow up with the MOU/organization separately, it's suggest to group them together and have individual officer follow up with the same group, implementing under same strategy.

Lastly, there are (9) MOU committed to have complimentary VIP registrations to each organization's primary annual meeting. And (13) MOU committed to hold a liaison meeting annually (either in person or via Conference Call. This will help further mutual understanding and enhance in co-operation. [Would suggest our President, David, to look into it and according to the above strategy come up from Tim \(PE\) and Bjarne \(Treasurer\) regarding ASHRAE STd/Professional developemnt/Certification matrix and Globalization matrix.](#)

Encl.

Appendix 1: List of MOU with MOU highlight.

Appendix 2: MOU analysis in various categories/groups

**Appendix 1: List of MOU with highlights**

Organization	Organization location	MOU signed date	MOU expiry date	MOU highlight	Any committed meeting?
1 American Institute of Architects (AIA)	US	January 28, 2004	Terminate in 3 years (terminate @ 2007/1/28) unless extend	To work jointly on energy use and energy efficiency issues related to the built-environment. To collaborate in Professional development and public outreach	
2 American National Standards Institute (ANSI)	US	October 14, 1998	3 yrs. term and automatically renew for every 2 yrs.	Responsibility of Secretariat functions in ISO/TC and/or SCs.	
3 American Society of Health Care Engineering (ASHE)	US	January 23, 2004	Not mentioned	Share products. To promote continuing Professional development and professional certification programs.	
4 Association of Higher Education Facilities Officers (APFA)	US	October 7, 2007	Not mentioned	To advance and promote mutual interests of engineering and facility professionals. Share products, promote continuous professional development.	
5 ATECYR-ASHRAE Memorandum of Understanding	Spain	October 24, 2008	Not mentioned	International collaboration	One (1) complimentary VIP registrations to each organization's primary annual meeting
6 Building & Construction Authority of Singapore (BCA)	Singapore	April 8, 2009	Not mentioned	International collaboration	Commit to hold a liaison meeting annually (either in person or via CC).
7 Building Owners and Managers Association (BOMA)	US	January 20, 2008	Should be reviews on a periodic basis	To optimize efforts of mutual interest. ASHRAE Std. 62.1, 90.1, 180, 189.1. To promote continuing professional development. Jointly promote educational programs to mbrs (such as member discounts to the other's mbr)	
8 Canada Green Building Council (CaGBC)	Canada	November 16, 2006	Not mentioned	Develop and maintenance of technical std and guideline.	Executive liaison committee (2p from each org) will meet face-to-face once a year.
9 Chartered Institute of Building Services Engineers (CIBSE) (updated 2013)	UK	January 30, 2013	periodic review at intervals not exceeding 5 yrs.	International collaboration. And Professional Review.	
10 China-United States HVACR Industry	China/US	January 29, 2007	Not mentioned	Protection of Intellectual Property at Trade Exhibition. Open communication and collaboration	
11 Chinese Association of Refrigeration (CAR)	China	April 11, 2006	Not mentioned	International collaboration	
12 Clinton Climate Initiative of the William J. Clinton Foundation (CCI) (WJCF)	US/International	August 1, 2006	Not mentioned. intend to set forth long term working relationship.	work jointly to promote and publicize their association so as to further their mutual climate protection and emissions reduction objectives, worldwide.	
13 Council of American Mechanical and Electrical Engineers, (CAMEE) (updated 2013)	US	January 28, 2013	3 years (terminate @ 2016/1/28), unless extended by written agreement.	Chapter collaboration. Explore opportunities to jointly produce publication.	Commit to hold a liaison meeting annually (either in person or via CC).
14 Facility Guidelines Institute (FGI)	US	May 20, 2009	Not mentioned. Should be reviewed on a periodic basis.	To advance and promote the mutual interests of architecture, engineering and healthcare facility professionals. ASHRAE Std 170 reprint license. Share products. Encourage collaborative and cooperative activities to promote continuing professional development and professional certification program.	
15 Federation of European Heating and Air-Conditioning Association (REHVA)	Europe	Not mentioned	Not mentioned	International collaboration	
16 Global Cold Chain Alliance (GCCA)	US	July 21, 2008	Not mentioned	To advance and promote the mutual interests of refrigeration and facility professionals. Agree to discuss a collaborative foundation that allows certification programs from each org to be complimentary. Seek ways to promote respective certification programs.	Commit to hold a liaison meeting annually (either in person or via CC).
17 Greater Philadelphia Innovation Cluster (GPIC)	US	October 24, 2011	January 31, 2016	to cooperate in connection with the GPIC project. A 22 mbr consortium that has been designated as an Energy innovation hub of the US DoE. Research: ASHRAE will assign a PSU-appointed non-voting liaison to RAC, and ASHRAE representative will serve on the GPIC Advisory Board. PSU will explore the potential if existing ASHRAE certifications to support its objectives.	
18 Green Building Council Brazil	Brasil	January 20, 2008	Not mentioned	International collaboration	A liaison committee comprising 2 representatives of ASHRAE and 2 representatives of GBCB shall hold a meeting once a year.
19 Green Building Initiative (GBI)	US	February 5, 2009	Not mentioned	Promote energy efficient buildings. Provide access to the Green Globes tool. Support and promote green building std, certification program and rating system	
20 Indian Green Building Council (IGBC)	India	October 9, 2009	3 years (terminate @ 2012/9/10). Agreement may be renewed by written consent.	Share products	
21 Indoor Environment Quality Global Alliance (IEQ-GA)	US/Europe	June 29, 2014	2 years (terminate @ 2016/6/29). To be extended by written agreement.	The Alliance was formed to Promote IEQ. Mbrs including ASHRAE, IAQA, AIHA, AWMA, AIVC(Europe) and REHVA(Europe).	
22 International Association of Plumbing and Mechanical Officials, Inc. (IAPMO)	US	January 25, 2012	3 years (terminate @ 2015/1/25), unless extended by written agreement.	Chapter collaboration. Joint publication. Agree to discuss ways that certification programs can be jointly developed or administered.	Two (2) complimentary VIP registrations to each organization's primary annual meeting. And commit to hold a liaison meeting annually (either in person or via CC).
23 International Code Council (ICC)	US	July 5, 2006	Not mentioned	Explore ways to optimize codes and standards development.	
24 International Facility Management Association (IFMA)	US/International	October 16, 2008	Not mentioned.	Share product. Explore Joint publications. Seek ways to promote respective certification programs. Collaboration. Discuss ways to promote adoption of code and standards.	Two (2) complimentary VIP registrations to each organization's primary annual meeting. And to hold a liaison meeting annually (either in person or via CC).
25 International Institute of Ammonia Refrigeration (IAR)	US/International	March 25, 2014	3 years (terminate @ 2017/3/25) unless extended by written agreement.	Chapter collaboration. Explore Joint publication. Agree to discuss ways that certification programs can be jointly developed or administered.	Two (2) complimentary VIP registrations to each organization's primary annual meeting. And to hold a liaison meeting annually (either in person or via CC).
26 Japan Society of Refrigerating and Air Conditioning Engineers (JSRAE)	Japan	May 21, 2010	Not mentioned	International collaboration, Explore Joint publications. Agree to discuss ways to promote adoption and widespread use of codes and standards of mutual interest.	One (1) complimentary VIP registrations to each organization's primary annual meeting. And to hold a liaison meeting annually (either in person or via CC).
27 Kuwait University, College of Engineering and Petroleum	Kuwait	October 4, 2009	Not mentioned	International collaboration	One (1) complimentary VIP registrations to each organization's primary annual meeting. And to hold a liaison meeting annually (either in person or via CC).
28 National Air Filtration Association (NAFA)	US	January 20, 2014	3 years (terminate @ 2017/1/20), unless extended by written agreement.	Explore opportunities to collaborate at the national, regional and local levels. Explore Joint publication. Joint promotion of codes and standards. Discuss ways that certifications programs can be jointly developed or administered.	Two (2) complimentary VIP registrations to each organization's primary annual meeting. And to hold a liaison meeting annually (either in person or via CC).
29 National Association of State Energy Officials, (NASEO) (updated 2013)	US	January 29, 2013	3 years (terminate @ 2016/1/29), unless extended by written agreement.	General collaboration. Joint promotion of state energy codes and standards; explore Joint publication	Agree to provide the other with a meeting invitation to the primary annual meeting.
30 National Environmental Balancing Bureau (NEBB)	US	November 12, 2008	Not mentioned.	General collaboration. Explore joint publication; seek ways to promote respective certification programs. Agree to discuss ways to promote adoption and widespread use of codes and standards.	Two (2) complimentary VIP registrations to each organization's primary annual meeting. And to hold a liaison meeting annually (either in person or via CC).
31 National Society of Professional Engineers (NSPE)	US	July 31, 2000	Not mentioned.	General collaboration. To promote an enhanced image and understanding of the engineer and the engineering profession. Jointly promote educational programs to mbrs.	
32 Practice, Education, Research for Sustainable Infrastructure (PERSI)	US	July 11, 2006	Not mentioned	Alliance formed with other organization. Purpose is to provide a means by which the infrastructure community can work cooperatively and collaboratively to promote and translate the philosophy of sustainability into action. (But only signed by ASHRAE & American Society of Civil Engineers)	
33 Society of Heating, Air Conditioning and Sanitary Engineers of Japan (SHASE)	Japan	January 29, 2013	3 yrs. Automatically renew for successive 3 yr. periods on a continuous basis.	International collaboration. Explore opportunities to jointly produce publications. Mbrs of each Society may purchase publications of the other Society at mbr rates.	Two (2) complimentary VIP registrations to each organization's primary annual meeting. And to hold a liaison meeting annually (either in person or via CC).
34 The Serbian Society for Heating, Refrigeration and Air-Conditioning (KGH), FTN, and UNS- ASHRAE-SB	Serbian	November 30, 2009	Not mentioned	International collaboration	
35 The Infrastructure Security Partnership (TISP)	US	March 11, 2002	Not mentioned	Offer technical support and sources for expert comment on public policy related to the security of the nation's built environment.	
36 United States Department of Energy (DOE)	US	April 22, 2015	3 years (terminate @ 2018/4/22), unless extended by written agreement.	encourage the continued development of standards related to energy efficiency. ASHRAE Std 90.1 and AEDG.	

## Appendix 2: MOU analysis in various categories/groups

Organization	Organization location	MOU signed date	MOUs analysis					Global collaboration		
			Green building	IEQ/IAQ	Refrigeration	Building operation	Professional development/Certification		ASHRAE Std/code	Joint Publication
1	American Institute of Architects (AIA)	US					1			
2	American National Standards Institute (ANSI)	US						1		
3	American Society of Health Care Engineering (ASHE)	US					1			
4	Association of Higher Education Facilities Officers (APFA)	US				1	1			
5	ATECYR-ASHRAE Memorandum of Understanding	Spain								1
6	Building & Construction Authority of Singapore (BCA)	Singapore								1
7	Building Owners and Managers Association (BOMA)	US				1	1	1		1
8	Canada Green Building Council (CaGBC)	Canada						1		
9	Chartered Institute of Building Services Engineers (CIBSE) (updated 2013)	UK								1
10	China-United States HVACR Industry	China/US								1
11	Chinese Association of Refrigeration (CAR)	China								1
12	Clinton Climate Initiative of the William J. Clinton Foundation (CCI) (WJCF)	US/International								1
13	Council of American Mechanical and Electrical Engineers, (CAMEE) (updated 2013)	US					1		1	
14	Facility Guidelines Institute (FGI)	US				1	1	1		
15	Federation of European Heating and Air-Conditioning Association (REHVA)	Europe								1
16	Global Cold Chain Alliance (GCCA)	US			1		1			
17	Greater Philadelphia Innovation Cluster (GPIC)	US					1			
18	Green Building Council Brazil	Brasil	1							1
19	Green Building Initiative (GBI)	US	1				1	1		
20	Indian Green Building Council (IGBC)	India	1							1
21	Indoor Environment Quality Global Alliance (IEQ-GA)	US/Europe		1						1
22	International Association of Plumbing and Mechanical Officials, Inc. (IAPMO)	US					1		1	
23	International Code Council (ICC)	US						1		
24	International Facility Management Association (IFMA)	US/International				1	1	1	1	1
25	International Institute of Ammonia Refrigeration (IiAR)	US/International			1		1		1	1
26	Japan Society of Refrigerating and Air Conditioning Engineers (JSRAE)	Japan						1	1	1
27	Kuwait University, College of Engineering and Petroleum	Kuwait								1
28	National Air Filtration Association (NAFA)	US		1			1	1		1
29	National Association of State Energy Officials, (NASEO) (updated 2013)	US						1	1	
30	National Environmental Balancing Bureau (NEBB)	US					1	1	1	
31	National Society of Professional Engineers (NSPE)	US					1			
32	Practice, Education, Research for Sustainable Infrastructure (PERSI)	US								
33	Society of Heating, Air Conditioning and Sanitary Engineers of Japan (SHASE)	Japan							1	1
34	The Serbian Society for Heating, Refrigeration and Air-Conditioning (KGH), FTN, and UNS- ASHRAE-SB	Serbian								1
35	The Infrastructure Security Partnership (TISP)	US								
36	United States Department of Energy (DOE)	US						1		
			4	2	2	4	15	12	8	18



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David Underwood, P.Eng., Fellow ASHRAE, CPMP  
President

100 Lakeshore Rd. E., Apt. 607  
Oakville, Ontario L6J 6M9  
Tel: 416.948.8902  
dunderwood@hvactrdu.com

Date: September 16, 2015

To: Doug Cochrane  
Edward Tsui

Subject: MOU Tracking and Organization

Gentlemen:

ASHRAE has a total of 36 (list attached) signed Memoranda of Understanding (MOU). Each organization varies in its strategic importance to ASHRAE.

ExCom has the responsibility to implement the actions listed in each MOU. This has not been occurring with any regularity over the past several years.

This assignment asks you to make an ASHRAE priority listing of all MOUs and their importance to ASHRAE and our allied activities. A recommendation as to which officers (by title) should respond to the MOU listed actions and finally set up a work sheet (spread sheet) that will track when specified actions do or do not occur.

Your report and recommended actions should be provided to ExCom prior to the Winter meeting in Orlando.

Thank you for your continuing work for ASHRAE.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Underwood".

T. David Underwood, P.Eng.  
President

Attachment: Listing of Signed MOUs

cc: ExCom

- [American Institute of Architects \(AIA\) \(PDF\)](#)
- [American National Standards Institute \(ANSI\)](#)
- [American Society of Health Care Engineering \(ASHE\) \(PDF\)](#)
- [Association of Higher Education Facilities Officers \(APPA\) \(PDF\)](#)
- [ATECYR-ASHRAE Memorandum of Understanding](#)
- [Building & Construction Authority of Singapore \(BCA\)](#)
- [Building Owners and Managers Association \(BOMA\) \(PDF\)](#)
- [Canada Green Building Council \(CaGBC\)](#)
- [Chartered Institute of Building Services Engineers \(CIBSE\) \(PDF\) \(updated 2013\)](#)
- [China-United States HVACR Industry \(PDF\)](#)
- [Chinese Association of Refrigeration \(CAR\) \(PDF\)](#)
- [Clinton Climate Initiative of the William J. Clinton Foundation \(CCI\) \(WJCF\)\(PDF\)](#)
- [Council of American Mechanical and Electrical Engineers, \(CAMEE\) \(PDF\) \(updated 2013\)](#)
- [Facility Guidelines Institute \(FGI\) \(PDF\)](#)
- [Federation of European Heating and Air-Conditioning Association \(REHVA\) \(PDF\)](#)
- [Global Cold Chain Alliance \(GCCA\)](#)
- [Greater Philadelphia Innovation Cluster \(GPIC\)](#)
- [Green Building Council Brasil \(PDF\)](#)
- [Green Building Initiative \(GBI\)](#)
- [Indian Green Building Council \(IGBC\) \(PDF\)](#)
- [Indoor Environment Quality Global Alliance \(IEQ-GA\) \(PDF\)](#)
- [International Association of Plumbing and Mechanical Officials, Inc. \(IAPMO\) \(PDF\)](#)
- [International Code Council \(ICC\) \(PDF\)](#)
- [International Facility Management Association \(IFMA\) \(PDF\)](#)
- [International Institute of Ammonia Refrigeration \(IAR\)](#)
- [Japan Society of Refrigerating and Air Conditioning Engineers \(JSRAE\)](#)
- [Kuwait University, College of Engineering and Petroleum \(PDF\)](#)
- [National Air Filtration Association \(NAFA\) \(PDF\)](#)
- [National Association of State Energy Officials, \(NASEO\) \(PDF\) \(updated 2013\)](#)
- [National Environmental Balancing Bureau \(NEBB\)](#)
- [National Society of Professional Engineers \(NSPE\) \(PDF\)](#)
- [Practice, Education, Research for Sustainable Infrastructure \(PERSI\) \(PDF\)](#)
- [Society of Heating, Air Conditioning and Sanitary Engineers of Japan \(SHASE\) \(PDF\)](#)
- [The Serbian Society for Heating, Refrigeration and Air-Conditioning \(KGH\), FTN, and UNS-ASHRAE-SB \(PDF\)](#)
- [The Infrastructure Security Partnership \(TISP\)](#)
- [United States Department of Energy \(DOE\) \(PDF\)](#)



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dunderwood@hvacrtdu.com

Date: September 16, 2015

To: Bill Klock  
Rick Zbin

Subject: Effective Use of Volunteer Time

The Presidential ad hoc Effective Use of Volunteer Time was completed last Society year. You are being asked to determine how and when the recommendations of that report (copy attached) will be implemented and by which body. You are to assist with any strategic issues surrounding effective implementation of these recommendations.

It is expected that this task will be completed and in place by mid-February 2016. A report will be submitted to the Spring ExCom meeting delineating successes and any implementation problems.

Thank you for your continuing work for ASHRAE.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Underwood".

T. David Underwood, P.Eng.  
President

Attachment: Effective Use of Volunteer Time Final Report

cc: ExCom





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# Initiative 2A – Volunteer Time Management Report

## Executive Summary

President Tom Phoenix established the *Effective Use of Volunteer Time* ad hoc committee to develop a strategy for improving the ASHRAE volunteers' experiences and increasing the number of active ASHRAE volunteers. The work of this ad hoc committee supports the ASHRAE Strategic Plan Initiative 2A – Volunteer Time Management. Through both face-to-face and teleconference meetings, the ad hoc committee developed recommendations to achieve these objectives. The top three priority recommendations are listed below and details for all recommendations are described in **Appendix A**.

Priority #1: Review a Handbook chapter/standard/guideline and develop a topic/RTAR for a research project at a regional meeting, such as CRC

Priority #2: Improve the volunteer experience by making it enjoyable, technically satisfying, efficient, and effective, perhaps by reducing bureaucracy and unnecessary administrative process and operations

Priority #3: Suggest TCs meet annually, at either the Winter Conference or Summer Conference, then conference calls on a quarterly basis (or as required)

## Background

ASHRAE stands out among other technical societies for the volunteerism of its members. It is the envy of other technical societies because of the amount of time its members give to the organization from society events, to developing technology, to administrating the society itself (e.g. BOD, Finance Committee, Councils etc.). Along with ASHRAE's committed and loyal staff, the hours of resources dedicated to advancing the arts and sciences of HVAC&R has allowed ASHRAE to become a major driving force in the buildings industry.

However, there is still room for improvement. Of ASHRAE's 54,000 members, only about 5,000 are actively involved in volunteering for ASHRAE through participation in chapter, technical and administration activities. Getting 2% more of the membership to volunteer would result in a significant increase in the Society's net volunteer effort.

To this end, the ASHRAE Board of Directors (BOD) included Strategic Initiative 2A – Volunteer Time Management in the current Society Strategic Plan: *ASHRAE must become more agile so that it can deliver products and services in a timely manner while respecting the value of volunteer time. ASHRAE will review all aspects of the organization to identify and remove encumbrances to agility and the respectful use of volunteer time.*

The critical importance of cherishing and nurturing our volunteer culture is called out in President Tom Phoenix's theme of *People, Passion, Performance*. President Phoenix brought his passion and focus to

this important endeavor by selecting a team of volunteers to consider how the Society experience can be improved to promote volunteerism.

## Presidential Ad Hoc

As recommended in the strategic implementation Tool Kit, President Phoenix created the *Effective Use of Volunteer Time* ad hoc committee and charged its members with developing a strategy to implement Initiative 2A. The members of this ad hoc committee are:

Sheila Hayter – Chair

Gordon Holness<sup>1</sup> – Co-Chair

Hugh Crowther

Pam Immekus

Ben Leppard

Nicholas Long

Sarah Maston

Ross Montgomery

Mick Schwedler

Joyce Abrams - Staff

The ad hoc committee members met in Atlanta in November 2014 to kick off the project and then during the 2015 Winter Conference in Chicago. Bi-monthly teleconferences were held with all or part of the ad hoc; the ad hoc leadership has held additional calls to manage the progress. In short, this ad hoc has walked the talk.

## Ad Hoc Approach

The ad hoc met November 24, 2014 to brainstorm the challenge and create a viable approach to creating a plan. The first challenge is that volunteerism is a big and complicated issue and is actually very hard to know where to start. Through good dialog the following was achieved:

The focus of the Committee would be on increasing the volunteer hours dedicated to running the organization at chapter level, developing and disseminating technology and administering Society functions.

- Increasing member participation in using the products and services that ASHRAE provides, while a noble cause, is not the purpose of this ad hoc.
- Getting volunteers to create and administer more products and services is the goal of this ad hoc.

## Measuring Success

As with all complex topics, measuring the result can be as hard as identifying what to do. The following two metrics were identified:

1. How does this activity improve the volunteer experience? (How does it make you feel good about the time you invest in ASHRAE?) This metric speaks to the need to make sure that those who already volunteer continue to do so. It is about protecting our base.
2. How does this activity increase the number of volunteers? This metric speaks to growing our ranks of volunteers.

The two metrics are used to rank possible activities and measure our success.

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<sup>1</sup> Gordon was instrumental in the early meetings in setting the ad hoc direction. Gordon stepped down in January 2015 to allow him time to address another mission-critical ASHRAE assignment.

# The Four Themes

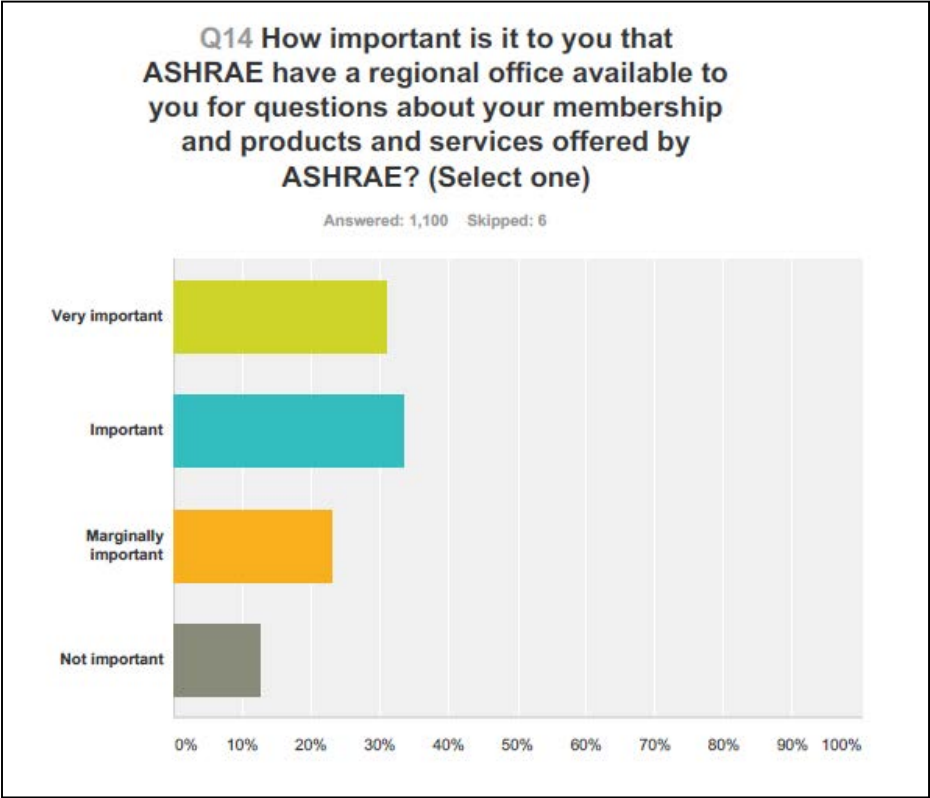
Four themes have been developed as most important to focus on to increase volunteerism.

## Volunteer Locally

The current ASHRAE model requires that those who want to volunteer in high-level technical and administrative functions need to come to ASHRAE (attend the Winter and Annual Conferences) rather than the Society’s making a reasonable attempt to meet the volunteers halfway. The further the distance a member must travel to a Winter or Annual Conference, the more prohibitive the issues are in both cost and time. The members who find distance to be a barrier may be just as passionate and skilled as any other member. This issue becomes most critical for our global members because we limit our Society meetings to U.S. and Canadian cities.

Figure 1 shows results of question from a recent survey conducted by the Planning Committee. The question specifically asks about the importance of local ASHRAE representation for products and services. From these results, we can infer that a means for volunteering locally is also very important.

Figure 1 - PLC Global Survey Question



The Volunteer Locally theme focuses on how to allow a potential volunteer to participate in society activities with the least impact on personal time and cost of travelling. The success metric is that more members volunteer (Metric 2). Moreover, local volunteers can be experts in specific fields of interest such as hot and humid climates or healthcare design for emerging economies. ASHRAE technology has been losing out on their valuable input. Local volunteers have the knowledge and experience to develop and produce the best technology for their local needs while taking advantage of ASHRAE’s resources to package and deploy the technology.

Our research program has not fully integrated global resources and talent into its ranks. We should learn

more about why this gap occurs and develop a process to get more involvement to include all of our donor groups around the world into our research teams.

Through our grassroots organization, ASHRAE already has an outstanding infrastructure for local volunteerism. By leveraging our chapter and regional structure and in particular the Chapters Regional Conferences (CRCs), there is an easy path to reach out to members locally.

Creating local means to participate does not need to be limited to just the CRCs, but the CRCs offer a good place to start to work out the initial coordination and potential issues. In the future, other venues and platform locations can be used following the same process. Both Members Council and separate parallel groups are also investigating best practices and means to strengthen the value of CRCs. This concept aligns well with their efforts. ASHRAE already has started some initial work to support virtual meetings, which is another method to volunteer locally.

Leveraging the CRC infrastructure will take the full support of the Director and Regional Chairs (DRCs), CRC host committees, chapter Boards of Governors and all three of ASHRAE Councils. Holding additional meetings where volunteers can participate in developing technology will strengthen the CRC meetings and will be a win-win for all.

The challenge for this “local volunteerism” effort is to ensure the work product that is created through local volunteerism finds its way into the Society meeting committee functions, final Society publications and other products. Our current structure is not set up for this approach. It will happen only with the full support of the Councils and committees that participate in the process.

Several initial areas have been identified and are listed in the proposed actions section. These actions will improve the affordability, desirability, and usability of our levels of service to all of our members, including the “other 50,000” who cannot attend Society meetings, by resonating “excitement” and bolstering attendance and participation at all levels of ASHRAE. The actions will increase our technology transfer and depth/breadth of our technical standards, handbooks and publications by dramatically increasing the input and participation from materially affected parties and individuals, providing “the most productive and rewarding experience that a local member has never had before.”

## Focus Participation

The Focus Participation theme speaks directly to respecting the value of each volunteer’s time. ASHRAE must be vigilant in identifying anything that gets in the way of a volunteer’s feeling good about the time he or she volunteers to the Society. The success metric is that we improve the volunteer experience (Metric 1). We expect that those who enjoy their volunteer experience will pass this on to other potential volunteers and so a secondary metric will be an increase in volunteerism and membership (Metric 2).

The Focus Participation theme identifies items that detract from the volunteer experience. ASHRAE has a long history as an organization and, thus, has built up a considerable amount of processes and procedures. Sometimes strict interpretation of the rules without compassion using “common sense” can be discouraging to volunteerism for the majority. If one is not careful, these processes and procedures can impede the volunteer experience. As an example, the Rules of the Board are over 300 pages long. Structure is important in a large organization and it maintains our consensus-based approach, but care must be taken to make sure it does not dominate or stifle the volunteer experience.

Leadership is another critical element. Agreeing to be on a committee, only to find that the Chair mismanages the meetings, can be a particular problem. In this situation, the committee’s result will

likely suffer and the volunteers will be frustrated possibly to the point of avoiding future assignments.

A third area of consideration is providing the tools to make volunteering efficient. In particular, easy access to pertinent information (procedures, past minutes, agendas activities by other groups that are relevant etc.) to perform the volunteer work is crucial. The timely posting of committee activities and minutes/notes to our ASHRAE member portals is crucial for the flow of information and progress at the speed of business. For this information sharing to be difficult in the current information age is a serious detriment to volunteerism by our younger members. Helpful tools can be expanded to leverage online and other social media to allow volunteerism to take place in a different manner than has been done for the past 100 years.

A list of issues that would cause a volunteer to stop participating was developed and counter measures are listed in **Appendix A**.

### Conference Participation

Each of Society's Winter and Annual Conferences is comprised of two events. One event is the technical program. Seminars, courses, symposia and forums are available for learning and professional development. Many opportunities to earn PDH credits are available. The other event is the administration or "business" of Society. Technical committees, social committees, project committees, Councils and the Board of Directors all meet during the Conferences. The committees and Councils, as well as the Board, are comprised of industry professionals who volunteer their time and expertise. These two events are intertwined, with the technical committees, guidelines and standards all providing expertise for the technical program.

As Society has grown, the number of meetings held during the Winter and Annual Conferences has greatly expanded to the point that a fully dedicated volunteer can have meetings from one Thursday night to the following Thursday morning (eight days). A more typical commitment is likely three to four days. The cost and time can be encumbrances and may limit the available pool of volunteers.

The meeting flow (subcommittees – committees – councils – BOD) was developed in an era before the internet, a time when face-to-face meetings were the only method available to perform business.

The ad hoc committee's discussion about Society meetings identified the following:

- Through teleconferencing, webinars etc., much more ASHRAE business is performed between Society Conferences than at the Conferences
- The best run groups perform the structured part of their business remotely, thereby allowing the face-to-face time to be more strategic and creative
- Over the past few years, two of the three Councils have worked their way to only one meeting during the Winter and Annual Conferences
- Over the past few years, the Board has added a pre-meeting conference call to address procedural activities and a post-meeting conference call to review action and information items coming out of the Society meetings
- Members like face-to-face meetings, especially for interactive discussions; "hallway discussion" is as important as formal meeting discussion; a structure that moves procedural and administrative activities to remote meetings and frees up time for dialog is efficient
- Administrative meetings often conflict with the technical program, so many volunteers do not have access to learning and professional development opportunities
- ASHRAE is one of only a few organizations that hold two full meetings per year
- ASHRAE is committed to the AHR Expo and drawing attendance to the expo is critical

- Although some groups meet several times during a conference, other groups struggle to achieve quorum at two meetings per year; the latter groups could create efficiencies by looking at other options for their meetings
- At the Conferences, some committees, especially those reporting to Technology Council, meet early in the week and then again at the end of the week, requiring a four to five day commitment for only one full day's total work

With the changes in how business is done today, taking a step back to look at how to structure the Society meetings to improve the volunteer experience makes sense. The success metric is that we improve the volunteer experience by focusing the meetings so that more can continue to volunteer at the Society level. (Metric 1). By improving access to the Conferences and minimizing the time and expense of attending them, more people will volunteer. (Metric 2).

Ideas about revamping Society Conferences and the meetings within them are included in **Appendix A**.

## Promotion

Through the ad hoc discussions it became clear that is not is not easy for someone to know how to volunteer even if he or she wants to. At the chapter level, direct mentoring creates a way for someone who attends meetings to volunteer in chapter activities. The effort for setting up mentoring programs and other similar initiatives falls to chapter leadership.

Volunteering at regional and especially Society levels can be intimidating for some members. A member in a home chapter may be available to mentor someone on how to volunteer regionally but this type of resource may not exist in every chapter. We have a captive audience of potential volunteers attending chapter meetings who could be an excellent target market for increasing our volunteer ranks.

To reach out to this potential pool of new volunteers, Society can provide tools to educate volunteers on how to volunteer in other parts of our organization. Through education on how to volunteer and the available options and their time requirements, individuals who share a passion to help can find and personalize a path to volunteer. (Metric 2).

## Proposed Actions to Enhance Volunteerism

As has been referenced throughout this report, actions that the Ad Hoc Committee proposes as ways to enhance volunteerism are provided in **Appendix A**.

## Recommendations for the Volunteerism Ad Hoc Committee

The members of the Effective Use of Volunteer Time ad hoc committee prioritized the committee's recommendations for improving the volunteer experience and increasing the number of volunteers as listed below. The committee strongly recommends that the BOD consider implementing the first three recommendations in the near term as well as initiating action to evaluate options for implementing the remaining five recommendations.

Priority #1: Review a Handbook chapter/standard/guideline and develop a topic/RTAR for a research project at a regional meeting, such as CRC

Priority #2: Improve the volunteer experience by making it enjoyable, technically satisfying, efficient, and effective, perhaps by reducing bureaucracy and unnecessary administrative process and operations

Priority #3: Suggest TCs meet annually, at either the Winter or Summer Conference, and meet by conference call on a quarterly basis (or as required)

Priority #4: Shorten the business meeting at Annual and Winter Conferences by at least one day

Priority #5: Provide formal Chair training

Priority #6: Provide viable options for remote attendance

Priority #7: Streamline Handbook and Standards processes

Priority #8: Develop a short program on volunteering at the Society level

Furthermore, the Committee recommends that, if the Board accepts the recommendations contained in this report, then to move implementation forward, either the committee be continued or reconstituted.

Respectfully submitted,

Sheila Hayter, Chair

Appendix A. Proposed Actions

Action	How this action improves the volunteer experience	How this action increases the number of volunteers	Required steps to implement this action	Proposed Schedule	Financial Impact to implement this action	Proposed ASHRAE group to own this action	Notes
1. Review a Handbook chapter/ standard/ guideline and develop a topic RTAR for a research project at a regional meeting such as CRC	Provides opportunity for members who do not normally participate in Society-level activities to add their expertise and regional perspective to Society-level technical documents and processes.	Encourages those volunteers who would not normally attend Society meetings to volunteer more time regionally. Increases the number of members (and potential member guests) to participate in Society-level technical activities. Target 40 new volunteers per region will participate in this opportunity.	Work with DRC, Members/Tech, Pub/ECC and CRC host committee to assign champions/chairs, and arrange an approximately half day of meetings in conjunction with the CRC. Ask for attendance of the appropriate persons from staff, Handbook Committee, Standards committee, RAC, TAC, and assigned TC(s) to monitor the session, and report back to the Society-level committees.	Begin immediately; 6 months duration to make the detailed plan; pilot program during 2016 Spring CRC	Travel for Society-level meeting member to attend regional meeting. Additional meeting room fees: \$31K per region, suggest 2 regions to be involved in the pilot for Spring 2016=\$52K	Region 2 BOD members (preferably Pub/ECC and Tech/C) to monitor and report on these activities	See Note #1 at bottom of spreadsheet.
2. Improve the volunteer experience by making it enjoyable, technically satisfying, efficient, and effective; perhaps by reducing bureaucracy and unnecessary administrative process and operations	Maintains consistency across all facets of ASHRAE - councils, committees, etc. Easier access to the Society activities and committee documents enhances the volunteer experience. Having a common place for storing documents will help with document version control, which will save time for those volunteers involved with developing the documents.	Establishes common standards that are utilized throughout Society activities to demonstrate quality and consistency. Shows members that ASHRAE is organized and increase the desire for members to volunteer to participate in develop ASHRAE products.	Common templates for meeting agendas, meeting minutes, MBOS, etc. Gather requirements from members; Evaluate existing platforms (current ones include basecamp, Google sites); Pilot the software/framework; Communicate to members the available options; Scale the rollout.	12 months duration to investigate and implement opportunities; proposed December 2015 to December 2016	Software licensing may be involved (\$100 - \$1000's per year). Printing cost for literature/forms, if needed.	PEC, ECC	The advantage of a software subscription would be the ease of switching platforms in the future.
3. Encourage TCs to hold one face-to-face meeting per year at either the Winter or Annual Conference, then conference calls on a quarterly basis (or as required)	Volunteers may have more time to participate in other aspects of Conference, with fewer TC meetings, conflicts between TC meeting times and Conference Technical Program would be reduced.	Volunteers can still be active in Society meetings while also earning PhD credits. Also with fewer meetings, the conference could be shortened, lessening the time away requirement, more members may volunteer	Review suggestion with TCs, get their feedback. Other ideas to "move forward". Also review schedule with Judy Marshall. Provide guidance and input. Scenarios should be evaluated with analysis of impact on conducting ASHRAE business and anticipated volunteer acceptance to proposed changes. Risk analysis recommended. Staff can help evaluate the impact on conference finances for shortening the conference (e.g., cost savings for BOD members to spend fewer days at the conference, lower conference registration fees, etc.).	6 months to develop a plan for BOD consideration, implement at the earliest meeting possible per contract terms with hotels that are already in place. 4-6 weeks to review options with TCs	Potential cost to accommodate electronic TC meetings. Potential savings from having fewer TC meetings scheduled during Winter Conferences and Annual Meetings.	TAC, ECC	See Note #2 at bottom of spreadsheet.
4. Shorten the business meetings at Winter Conference and Annual Meetings by at least one day	Volunteers participating in the business portion of the Winter & Annual Conferences will spend less time in meetings, leading to more time available to participate in technical program or AHR Expo. Requires conference participants to spend less time away from home/office. Participants do not need to choose between learning and going to business meetings. BOD/ Council volunteers would be required to dedicate fewer days to attend the conferences leading to personal savings for the volunteers.	New volunteers will be more likely participate if there is an overall belief their time is being used efficiently. More volunteers will consider serving on the Board if less time (less \$) away from work/family.	Review meeting requirements with current Board. BOD and hoc committee formed to coordinate council involvement. Staff to provide guidance and input. Scenarios should be evaluated with analysis of impact on conducting ASHRAE business and anticipated volunteer acceptance to proposed changes. Risk analysis recommended. Staff can help evaluate the impact on conference finances for shortening the conference (e.g., cost savings for BOD members to spend fewer days at the conference, lower conference registration fees, etc.).	6 months to develop a plan for BOD consideration, implement at the earliest meeting possible per contract terms with hotels that are already in place. 4-6 weeks to review options with Judy Marshall	Two face-to-face meetings for ad hoc committee members assuming 6 to 8 members) at \$5K to \$10K per meeting. Shorten the business meetings will improve finances for holding the conferences.	BOD ad hoc committee to facilitate/ coordinate discussions between council. Cross-functional team with representatives from Tech/C, MCC and PEC, ECom, and the BOD	
5. Provide formal training for all committee chairs (TCs, standing, council, regional, and chapter)	Better committee chairs will result in the committee members accomplishing more and having a better experience for the time they donate. These volunteers will continue to donate time.	Some growth due to the opportunity to learn professional skill (committee leadership). Word of mouth that volunteering with ASHRAE is a good experience and promotes professional growth. Retention of those who volunteer and increased participation due to additional volunteers.	Create leadership training course. Consider an on-line course; initiate training.	6 to 12 months duration to develop training materials. Roll out during the 2016 Annual Meeting	Travel for staff and travel for volunteers developing course. Travel for instructor to course: \$3.5K	Work with ASHRAE staff to develop metrics to measure the impact of this action (e.g., retention rates or measuring less churn rates)	
6. Provide opportunities for remote attendance to ASHRAE events	Remote attendance options give more members the opportunity to attend ASHRAE events with no travel costs and significantly reduced amount of time volunteers must dedicate to participating in ASHRAE events.	Members who do not or cannot attend the Winter Conferences and Annual Meetings would be able to volunteer and provide input.	Identify, evaluate, test, and implement best methods for providing remote attendance opportunities.	6 to 12 months duration to be ready to implement. Roll out to 10 committees for January 2016 Winter Conference. Available to all committees by June 2016. Availability to all TCs by January 2017.	Fees for providing internet connection during all meetings. Reimburse (if necessary) people for using their phones as the hot spot for the meeting. Possible reduction of people attending and paying registration at Winter and Annual Conferences.	All three Councils should be involved, ECC should play a leading role	
7. Streamline Handbook and Standards processes	Reduce the amount of volunteer time required to accomplish the work. Having standards written in a machine readable format would ease the development of documents by easy merging, history of all revisions, line-by-line comments, etc.	It does not increase the number, but keeps people from withdrawing because of the additional burden of this work	Develop small group to identify methods to streamline standards and handbook process. Communicate openly with those primarily affected (MOS, Handbook chair, Standards Chair)	1 - 3 years duration	Meetings should be done electronically except if at Winter Conferences and Annual Meetings. Staff and volunteer time required to identify and implement recommendations.	Ad hoc working with the following groups: PEC- Handbook Committee, Tech Council - Standards Committee	
8. Develop a short program on volunteering at the Society level	Outlining how to navigate ASHRAE starting at the Society level and making available clear links to volunteering will help those who are volunteering at the Society level recognize new opportunities for volunteering and help provide a growth path for volunteers to grow as a Society volunteer.	Increase the number of volunteers desiring to be in Society leadership roles, have a multi-year succession plan for all Society leadership roles	Work with staff and Membership Promotion to create a short video, ppt, or other outreach mechanism to educate members on volunteering and how to volunteer. Identify the best venues for this outreach.	9 months duration. Roll out at spring or fall CRCs	Work will be led by volunteers and produced by staff so no financial impact for creating the outreach content. May be costs for producing the outreach, such as video production.	Membership Promotion Committee	See Note #3 at bottom of spreadsheet.
Note #1: Cost Breakdowns: 1. Staff time and travel? One extra staff member will be assigned to monitor and document the pilot protocol; \$1K. 2. Advertising and Marketing assist Regional CRC costs are covered by Region and Chapter(s). 3. Regional meetings at the CRC for the selected HB chapter, SPC/SSPC, RAC project, and seminar; mainly expense of staff and volunteer representative from the Society SDC, HB, RAC (volunteer member) to attend at least one day meeting of the groups, including registration fees; \$5K. 5. Approximately \$3K for							
Note #2: TAC to work with the TCs to improve how face-to-face time is used (including re-evaluating the standard TC meeting agenda) and develop/implement means for ensuring productivity with planning for Winter Conferences and Annual Meetings.							
Note #3: This action addresses recruiting more volunteers for Standing Committees, Technical Committees, etc. Most members have no idea what it takes to join a committee and how							





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David Underwood, P.Eng. Fellow ASHRAE, CPMP  
President

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Oakville, Ontario L6J 6M9  
Tel: 416.948.8902  
dunderwood@hvacrtdu.com

Date: September 16, 2015

To: Mark Miller  
Larry Fisher

Subject: IAQA Liaison

Gentlemen:

As our new partner business unit, we need to maintain a strategic relationship with IAQA to assure them of our continuing support. We also need to be aware of strategic developments that IAQA is considering to be sure they align with the ASHRAE strategic goals and initiatives.

A report is expected to be submitted at the fall and spring ExCom meetings as well as at the Winter meeting in Orlando and the Annual meeting in St Louis..

Thank you for your continuing work for ASHRAE.

Sincerely,

A handwritten signature in black ink, appearing to read "T. David Underwood".

T. David Underwood, P.Eng.  
President



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President

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Oakville, Ontario L6J 6M9  
Tel: 416.948.8902  
dunderwood@hvacrtdu.com

Date: September 16, 2015

To: Karine Leblanc  
Keith Yelton

Subject: Chapter Educational Offerings

Chapter educational offerings require a strategic assessment to determine the best delivery mechanism for effective chapter use. The Austin report looking in to Educational Materials (copy attached) as well as liaison to the Presidential ad hoc on Chapter Volunteerism and Engagement is essential in the strategic examination of this subject.

We are expecting a final report to be submitted to the BOD before the Annual meeting in St Louis June 2016.

Thank you for your continuing work for ASHRAE.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Underwood", written in a cursive style.

T. David Underwood, P.Eng.  
President

Attachment: Members Council Report

## Report to Members Council – Billy Austin

**MBO #5:** Develop plan to offer chapters more effective means (reduced cost) of delivering ASHRAE education products.

---

### Effective ASHRAE Materials Delivery To and Through Chapters

This document recaps a MC/PEC working group investigation and survey of chapter leaders on how the society could gain greater chapter involvement in the delivery of ASHRAE training materials.

ASHRAE has created a wide variety of education programs for members. Most of these programs are marketed and delivered directly from the Society to members. This is due in large part to the advances in digital communications and growing diversification of ASHRAE and potential ASHRAE member interests. The Distinguished Lecturer's (DL) program is the only ASHRAE society education related program that is generally considered to be successfully provided through the chapters.

Many chapters are struggling to support members who have educational needs ranging from the basic fundamentals to advanced spectrum products and applications. Chapter meeting programs on basic fundamental topics are often too shallow and broad in subject matter for some, whereas the advanced topics may be applicable and/or of interest to only a small subset of attendees. Our working group's survey of Chapter Presidents/CTTC Chairs found this issue more pronounced in the medium and small ASHRAE Chapters. These Chapters struggle to find good topics and speakers that attract the member attendance (and revenue) they need to survive. Further, ASHRAE Chapters cannot generate revenue by advertising or hosting paid webinars to their members whereas Society can and is increasingly doing so. This continuing trend is due to advances in digital communication delivery methods. With this ongoing flattening of content delivery, what can be done to help the smaller and medium chapters survive? Following, our working group provides suggestions for the Members and Pub/Ed Council to consider.

The expanding scope of the ASHRAE brand and the increasing diversity of career paths in our industry is making it increasingly more challenging to effectively meet and deliver all of the educational needs of our ASHRAE membership. Also, ASHRAE is in competition with other organizations that can fill niche subject content with digital delivery. An ASHRAE member's tie to his/her chapter can be considered a strategic strength that potentially allows the chapter to more effectively deliver ASHRAE educational materials to that member.

Our working group tried to avoid scope creep, and therefore concentrated our focus mainly on:

- 1) How can ASHRAE Society help chapter's champion self-directed or local group learning using ASHRAE educational materials to provide better educational opportunities for chapters? This in turn could increase attendance and ultimately increase membership.
  - 2) What subject matter should our ASHRAE materials teach? What do our members want and are they getting it today?
  - 3) What are the best chapter delivery methods for ASHRAE educational material?
- A. Ideas for Members and Pub-ED Councils to consider:
- 1) Incentivize chapters to market ASHRAE educational material, i.e. involve them. Pay them a percent of the income of courses taken by their Chapter members.

## Report to Members Council – Billy Austin

**MBO #5:** Develop plan to offer chapters more effective means (reduced cost) of delivering ASHRAE education products.

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- 2) Determine which chapters have requested/purchased ASHRAE educational materials, and what those materials were, over the past several years. What were the results? How could it be expanded to include many chapters that have no usage?
- 3) Survey Chapter program chairs to determine the need a database of free presentations to select from to fill in chapter programs' annual schedule. This option would supplement the DL and other good programs. Attached examples include a presentations Excel files used by Region I (see Section D. below and also Attachment D), Region IX (see Attachment B); and an on-line beta created by the College of Fellows around 2009 (see Attachment C). Our working group's survey of Chapter leaders (see Attachment A) indicates that this idea is highly favored and needed. Some of our thoughts regarding this database are as follows:
  - a) This type of offering would target a great need - chapter presented programs on subjects of their interest that are locally customized.
  - b) Needs to be a continuous process.
  - c) Needs to be searchable to find presentations chapter and student members are interested in.
  - d) Some programs might be downloaded and then customized for local chapter meetings or give them the author's contact info to invite the author to speak.
  - e) This would supplement, not replace, the DL program and ASHRAE webinar offerings.
  - f) An idea of how this database might be created is as follows: Chapters or individuals submit their presentations to see if they are acceptable. If yes, parameters about the presentation are added to the database. This allows program chairs to find the presentation, delivery method, some key words, and who wrote it. This process could get rid of the "commercial" aspect of some presentations. All of the representations could be browsed on-line by the chapter program chair. Information could also tell them if an external presenter is available to present the subject.
  - g) If the database or excel file has contact data, it should have controlled access for privacy reasons. Perhaps Chapter CTTC and Program Chairs and Regional CTTC Chairs.
- 4) Continue the very successful DL program.
- 5) Provide discounted pricing rates to chapters that present ASHRAE educational materials to their membership thru the chapter. Steve Comstock could possibly assist in creating a good business case. This needs expansion. How much is price a factor in participation? What makes sense?
- 6) Make the ASHRAE National Meeting Programs available to Chapters for local viewing.
- 7) Survey the ASHRAE membership, including student chapters, on the types of educational webinar material and delivery methods they would be interested in. These surveys should be sortable on three chapter sizes to see if chapter size affects preferences.
- 8) Is there a market for a webinar that includes an ASHRAE document such as a standard that can be seen and read as the presenter explains the documents contents, their intent, and their application? This would be, in effect, a live version of the standard, or other document. This could be combined with a presentation related discount on the standard or guideline presented.
- 9) Some YEA members (Cleveland chapter) have requested offerings for young engineers such as Fundamentals of HVAC, i.e. perhaps a condensed version of ASHRAE HVAC design training. (WVU Students want programs beyond the basics – they wanted info on net zero designs, etc.)

## Report to Members Council – Billy Austin

**MBO #5:** Develop plan to offer chapters more effective means (reduced cost) of delivering ASHRAE education products.

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- 10) Training that provides the education leading to an ASHRAE certifications. Care would be necessary to not directly tie the training to the test as this is not allowed per ANSI standards for certifications.
  - 11) Offer training for MCA and ASPE certification requirements. This might attract new members from the contractor community. We could list about 20 other organizations that overlap ASHRAE. Why would they approve ASHRAE provided training as acceptable for their certifications? This might require another survey.
  - 12) Offer training at Chapter meetings that will assist contractors in renewing their licenses. This could be for local license requirements or perhaps on a national basis. Research could be done.
  - 13) Regions to offer PowerPoint type presentations that Chapters can customize and present on state-wide issues. In particular encourage statewide program content to provide consistency across the state. This would help all sized chapters if the state or providence has more than one chapter. (Chapters add a local flavor to their presentations which draws members to their meetings. How can generic presentations get locally customized?)
  - 14) A member of the Cleveland Chapter has investigated gaining approval of chapter meeting programs by the State of Ohio Contractors organization for credit. He investigated these requirements, and subsequently suggested that ASHRAE investigate possible program approval on a national basis so that we might provide a blanket approval for all of our chapters.
- B. Ideas from Steve Comstock on expanding the ALI usage. Steve explained that there are generally four methods by which chapters do this as follows:
- 1) Chapters bought the Self-Directed Learning texts and used them in Group Learning environments. That is likely hard to report because individual members purchase them and may not necessarily know if it is for a chapter or company or school. Steve will see what we find from looking at bulk orders which is the special pricing that applies.
  - 2) Chapters who purchase the instructor led courses. This is easy to find because we have chapter pricing. We should be aware, however, that ASHRAE generally loses money when chapters schedule instructor led courses. That is because the cost of the training often does not cover the cost. An exception is Mississippi, where a series of courses were scheduled – we ask that Steve expand on this if he has indication on why these MS courses were so successful.
  - 3) Chapters who license course content and present the courses themselves. This fits the price model but chapters usually want the instructor.
  - 4) HVAC Training. In this case, ASHRAE schedule the training in major metropolitan areas that area also transportation hubs. ASHRAE assumes all risk and pays all costs. Chapters promote and receive a percentage if a certain threshold is met. It is not reasonable to hold this 3 to 5 day training anywhere but a large chapter.

In Steve's opinion, a real win/win could be for Members Council to subsidize the cost of the ALI instructor led training to some extent, like they do for DLs, allocated per region. That way there is a selection process and PEC is able to maintain its business model. If ASHRAE does not want to just move money from one pocket to another, another option could be for MC to pay the instructor travel and ALI pays the honorarium. That enables ALI to lower the cost. In either case, the chapter

## Report to Members Council – Billy Austin

**MBO #5:** Develop plan to offer chapters more effective means (reduced cost) of delivering ASHRAE education products.

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would still pay a fee for training and would recover that by charging a fee to the attendees, but at lower cost access to training. This also helps internationally because the travel cost bumps the ALI price up (instructors require travel not transportation).

- C. Survey responses (Attachment A). This May 2015 survey, performed directly by our working group on a sample of CTTC Chairs and Chapter Presidents data, is sorted into three groups - large, medium, and small chapters. Some chapters had two different people do the survey - we counted both votes but the chapter only once. The survey results are on Sheet 1. Sheet 2 shows all the chapters worldwide, assigned according to chapter size. We calculated an average score for each question, taking care not to bias it with the "no" votes. The detail columns are hidden. The columns are color coded according to chapter size. The most popular answers (lowest average number) within each question block are highlighted in blue.
  
- D. Region I NY Approval for Programs within Region I - Best practices example (See also Attachment D) In New York, it is required each year that professional engineers have additional training in order to renew their professional licenses. An organization was established to help meet those needs. Following is a link to this program that explains the program:  
<https://practicinginstitute.org/>. Since New York is in the heart of Region I, and surrounding states have engineers that provide engineering services to New York clients; the Region I ExCom has taken steps to become a PIE certified Sponsor Organization. In this way, all of Region I can benefit and manage it better on a combined platform rather than a Chapter level. They have about 6 evaluators who review programs for the 15 chapters in the region and approve these programs if they meet the guidelines. Once met, the program carries a Professional Development Hour (PDH) credit. The Chapters can then offer a value to their local membership by presenting these programs and therefore attract more professional members who require credits. We all know program drives attendance and membership if a value is present. Region I has a PIE Administrator who takes care of all the paperwork and reports all information back to PIE. They have been an approved member for about two years and have achieved great success.

Chapter CTTC Program and Training Survey Questions						
Your Chapter Name _____						
Region						
Chapter - Number of ASHRAE Members						
ASHRAE Assigned Chapter members (no students)						
Chapter size Small<150 Large >400 Medium 150-400						
Your Current Chapter Position						
	count	large average	count	medium average	count	medium average
1) Please rank methods of delivering technical training to local ASHRAE members? (1 is best)						
a) Training presentations at local chapter meetings	11	1.18	11	1.09	5	1.80
b) Training presentations at regional meetings	11	3.00	11	3.00	5	2.80
c) ASHRAE Webinars	11	2.82	11	3.18	5	2.60
d) ASHRAE self-directed learning on-line modules	10	2.90	11	2.73	4	4.00
e) Other _____					3	3.00
2) Please rank how ASHRAE can improve ASHRAE training at the local level? (1 is best)						
a) Continue to hold monthly local chapter meetings with training presentations	11	1.09	11	1.45	4	2.00
b) Change to quarterly regional meetings with training presentations	8	3.88	11	3.91	5	3.60
c) Chapter sponsored on-line meetings and training webinars	10	2.60	11	3.09	5	2.80
d) Local training focused event (1/2 day or all day)	11	2.00	11	2.18	5	2.20
e) Regional meetings with training presentations	10	4.30	11	4.09	5	3.80
f) Other _____					1	6.00
3) Would access to an international database of available ASHRAE approved Distinguished Lecturer (DL) led training courses, Archived Webinars, Video Presentations, and Self Directed Learning Modules be of						
a) Yes – a lot. Great idea	5	1.00	7	1.00	4	1.00
b) Yes – would use	1	2.00	3	1.33	1	1.00
c) Maybe – need to see it	2	1.00	2	1.00	0	#DIV/0!
d) Marginal Use or no use	2	1.00	0	#DIV/0!	0	#DIV/0!

4) Please rank which attributes of an international ASHRAE training programs database would be most helpful to the local chapter? (1 is best)						
a) Contain a CTTC Chapter Chair generated popularity score	9	5.00	8	5.25	5	2.60
b) How often the course has been presented and the general member response	9	3.22	9	4.89	5	3.60
c) Capability of local chapters to record and share good presentations at their meetings	9	4.67	9	3.11	5	5.60
d) Capability for downloadable generic presentations that can be locally customized	10	2.80	9	2.33	5	4.20
e) All presentations continually monitored and maintained by ASHRAE staff	9	3.56	10	3.80	5	4.80
f) Usable by all Chapters worldwide	8	4.00	7	5.43	5	7.60
g) Searchable with filters to find programs of interest	10	2.50	10	4.40	5	4.80
h) Author information and date created	8	5.88	7	7.57	5	7.20
i) Includes feedback from chapters on presentation	7	5.14	9	4.56	5	4.60
j) Other _____					0	
5) Please rank which subject matter is currently most important for ASHRAE training materials? (1 is best)						
a) Engineering Fundamentals	7	2.43	11	2.18	5	3.40
b) Application of ASHRAE Standards	8	2.00	11	3.00	5	2.40
c) Engineering and calculation procedures and best practices	7	2.86	11	2.27	5	2.60
d) New technology fundamentals and applications	9	1.89	11	2.55	5	2.40
e) Other _____						
6) What five subjects are most important to your chapter potential or current members?						
7) Please rank which types of educational and training materials our members want? (1 is best)						
a) Printed material	10	3.60	9	2.67	5	3.80
b) DL Presentations	10	1.70	10	1.70	5	2.00



c) On-Line Webinars	10	3.00	10	2.90	5	2.60
d) Video presentations	10	3.60	9	3.78	5	4.60
e) On-Line self-directed learning modules	11	2.18	10	3.30	5	3.60
f) other						
8) What other organizations/subjects compete locally for your member training interest?						
1. _____						
2. _____						
3. _____						
4. _____						
9) Please rank how can ASHRAE help promote self-directed or local group learning in your chapter? (1 is best)						
a) Group discounts by ordering through the local chapter	7	1.71	8	2.13	5	2.00
b) Chapter recognition for self-directed courses utilized by local chapter members	9	2.89	9	2.44	4	1.75
c) National recognition of individuals completing ASHRAE training courses	9	3.11	8	3.25	4	3.50
d) Give chapter a financial credit for each course taken by a chapter member	9	1.67	9	2.00	4	2.50
e) Other _____					1	5.00
10) Please rank how the following might incentivize your chapter to pursue ASHRAE materials? (1 is best)						
a) National recognition of local chapter based upon the amount of ASHRAE training presented	8	2.38	8	3.88	3	4.67
b) National recognition of individuals completing ASHRAE training courses at the local chapter	8	3.75	9	3.11	3	3.67
c) Training material cost reduction based on % or number of participants	9	2.00	9	1.89	4	2.75
d) Presidential Award of Excellence (PAOE) points for Chapter Technology Transfer Committee (CTTC)	8	3.88	8	3.75	4	3.00
e) Chapter Recognition during the Chapters Regional Conference (CRC) by the regional and/or society officers	8	3.63	9	3.89	3	4.33
f) Recognition of member completing an ASHRAE course(s) at the local chapter	8	4.25	10	2.50	3	2.33
g) Other ____						

ATTACHMENT B

# ASHRAE

*Technology for a Better Environment*

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## SPEAKERS LIST

### Region IX ASHRAE

To be used for the year 2005-2006 (updated 6/05/05)

Introduction: Region IX Speakers List is a provided by the Regional IX Vice Chair of Chapter Technology Transfer Committee from responses and recommendations made by the Chapter Chairs and their PAOE reports. The Program Evaluation Summary as submitted by the CTTC is the source of this information.

#### Topic List by Speaker Number

1. Liability in HVAC & R
2. Trends in Humidification
3. Kitchen Ventilation Systems
4. Acoustic concerns in HVAC
5. Design and Installation of Fire/Smoke Dampers
6. Salt Lake City Olympic Park Bobsled and Ice Rink
7. How Advances in Digital Electronics Effects Pumping Systems
8. Fan and System Interaction
9. Secondary Coolants & Corrosion
10. Steam System Design
11. Fundamentals of Fans
12. New Weather Data for Energy Calculations.
13. Infrared Heating - Principles and Applications
14. Open Interoperable Control Systems
15. Wind as a Viable Energy Source.
16. Integration of LANs/Enterprise Management Systems
17. Environmental & Safety Concerns with HVAC Refrigeration
18. Fume Scrubbers and Industrial Ventilation
19. Combustion Venting, Codes, Violations and Solutions
20. Introduction to the International Energy Code
21. Fanless Air Handler
22. Performance Contracting
23. Laboratory Ventilation
24. Legionnaires Disease
25. Coal Bed Methane Production and Dewatering Process
26. Deciphering the Foreign Language of Variable Frequency Drive Specifications
27. Open Protocol (Do you remember how to spell pneumatics?)
28. Direction of the Energy Industry in the Southwest

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

ASHRAE REGION 9  
REGIONAL SPEAKERS LIST  
CRS 2004

29. Filtration for Cooling Towers
30. Free Cooling with Cooling Towers
31. Why Ammonia
32. Forensic Engineering
33. Commercial Geothermal Heat Pump Systems
34. Kitchen Ventilation Systems
35. Water & Air Balance
36. Principles of Fan Design
37. Valves-Selection and Dezincification
38. Trends in Filtration for Energy Efficiency and Building Security
39. Understanding ARI Ratings of Unitary Packaged Equipment
40. Theories of Liability and Risk Management in Construction
41. IAC-Anthrax Concerns
42. Package Unit Optimization
43. Indirect/Direct Evaporative Cooling
44. Where Do ASHRAE Membership Fees Go?
45. Chiller Optimization
46. Low NOX Boilers
47. Using Water Source Heat Pumps
48. Displacement Ventilation
49. Improving Efficiency of Chilled Water Plants
50. Under Floor Air Distribution
51. Hiring Generation X-er's
52. Fire and Smoke Damper Code Revisions
53. Improving Variable Primary Pumping Efficiency
54. Construction Law Do's and Don'ts
55. Laser Additive Manufacturing
56. Boiler Inspections & Current (Montana) Legislature Concerning the Boiler Field
57. Gas pressure Regulators
58. Mechanical Room Monitors & Sensors
59. Combined Piping for Mechanical & Auto Sprinkler Systems
60. Ten Issues About ASHRAE 90.1-2001
61. An Innovative Solution for Controlling Water Vapor Problems in Cold Insulation Systems
62. Tubular Duct Systems-Non-Metal
63. Ultra Violet Emitters
64. Biological Safety Cabinets and Fume Hoods
65. Green Power
66. Professional Liability for Design/Build Projects
67. Ultra Violet Light in HVAC
68. Under Floor Air Distribution
69. Characteristics of VAV Acoustics
70. New Building Commissioning
71. Water Source Heat Pumps, Issues and Alternatives
72. Commissioning
73. VAV Terminal Design-Series versus Parallel
74. ASHRAE Standard 15-Mechanical Room Design
75. Designing Laboratory Exhaust Systems
76. ASHRAE 90.1 and LEED
77. HVAC Vibration Isolation and Seismic Restraints
78. Kitchen Ventilation-Recent Research and Trends

79. Open Systems Discussion
80. Screw Compressor Technology
81. Preventing Cycling in Boiler Systems
82. VFD's on Fan Systems
83. Building Commissioning Workshop
84. Continuous Commissioning of Buildings
85. HVAC in Iraq
86. Practical Clean-Room Design
87. Integrated Design for High Performance Green Buildings
88. Proper Insulation Inspections for Mechanical Systems
89. Modulating Gas Valves in Make-Up Air Units
90. Variable Speed Pumping
91. Variable Geometry VAV Air Distribution
92. LEED Certification for EPA Region 7 Science & Technology Center
93. Humidification Choices in HVAC Applications
94. Control Interoperability-Where Are We Now?
95. Water Treatment in Heating and Chilled Water Systems
96. Ground Source Heat Pump Applications and Design
97. Ultraviolet Light in Kitchen Ventilation
98. Humidification for Light Commercial & Residential Applications
99. Types of Boiler Combustion Methods and Resulting Efficiencies
100. Renewable Energy Opportunities and Prospects
101. Geothermal Well Field Install/Specifications
102. Western Area Power Administration Power Allocations
103. Building Energy Analysis
104. LEED Certification
105. Bio-mass Boilers
106. Refrigerant Phasing
107. LEED and USGBC
108. ASHRAE Std 62, Can a Casino Meet the Requirements of STD 62?
109. IAQ and Heat Recovery
110. UV Technology for System Capacity, Maintenance and IAQ
111. Demand Ventilation controls
112. Meeting Humanity's Greatest Challenge-Global Warming
113. Snow Melting with Radiant Heat
114. Make-Up Air Topics for Southwestern United States
115. Natatorium Design Issues
116. UL Rating for Smoke Removal Exhaust Systems
117. Getting LEED Points with Indirect/direct Evaporative Cooling
118. Indoor Pool Dehumidification Designs
119. Infra-Red Heating & Design
120. Fabric Air Duct Systems
121. Gas Appliance Venting
122. Glycol and Water Treatment
123. Hydronic System Commissioning
124. Managing Extreme Heat: Cooling Strategies for High Density Systems
125. Pumps: Selecting, Detailing and Scheduling
126. Ten Most Common Legal Mistakes made by Mechanical Engineers
127. DX Split System Refrigeration Systems
128. Communicating with Monkeys, Dogs and Bears

ASHRAE REGION 9  
REGIONAL SPEAKERS LIST  
CRS 2004

- 129. Chemical and Biological Release Design Protection
- 130. Environmental Issues for the Community and Business
- 131. Water Balance and Pumps

1.
  - Speaker: Robert A. Garcia
  - Company: The Insurance Exchange
  - Address: 168 North Meranec, Suite 110  
St. Louis, Missouri 63105
  - Phone: 314-727-3330
  
  - Topic: Liability in HVAC&R
  - Abstract: Mr. Garcia described the relationship of owner, designer, vendor and contractor during a project and the necessary understanding that each must have of their responsibilities on any problem projects in order to avoid litigation when problems arise.
  
2.
  - Speaker: Bruce Billedeaux
  - Company: Armstrong International
  - Address: 816 Maple Street  
Three Rivers, Michigan 49093
  - Phone: 616-279-3349
  
  - Topic: Current trends in Humidification
  - Abstract: Trends in HVAC regarding humidification and update on technical committees that work on humidification principles and design criteria.
  - Date: 02/2000
  - Chapter: Kansas City
  
3.
  - Speaker: Mike Morgan
  - Company: Greenheck Corporation
  - Address: P.O. Box 410  
Schofield, Wisconsin 54476
  - Phone: 715-355-2549
  
  - Topic: Kitchen Ventilation Systems
  - Abstract: Reviewed the types of kitchen hoods and their typical applications, methods of supplying make-up air and problems related, codes/standards and what they mean.
  - Chapter: New Mexico
  - Comments: No limitations on travel distance but does limit the number of presentation per year.
  
4.
  - Speaker: Bob Coffeen
  - Company: R.C. Coffeen, Consultants in Acoustics
  - Address: 9214 Manor Road  
Leawood, Kansas 66206
  - Phone: 913-648-8780
  
  - Topic: Acoustics in HVAC

ASHRAE REGION 9  
REGIONAL SPEAKERS LIST  
CRS 2004

- Abstract: The importance of having proper information and criteria when designing Acoustics associates with HVAC systems.  
Comments: Travel limitations unknown.
5. Speaker: Robert Wasilewski  
Company: SMACNA  
Address: 4201 Lafayette Ctr. Drive
- Topic: Proper Design and Installation of Fire/Smoke dampers.  
Abstract: Requirements for the proper design/installation of F/S Dampers in various situations. Code issues related to F/S Dampers and responsibilities of contractor, engineer, inspector, manufacturer and owner.  
Chapter: New Mexico
6. Speaker: J. Howard Van Boerum, P.E.  
Company: Van Boerum & Frank Associates  
Address: 330 S. 300 East  
Salt Lake City, Utah 84111  
Phone: 801-530-3148
- Topic: Salt Lake City Olympic Park bobsled and ice rink's design  
Abstract: Discusses the design from conceptual stages and site selection, through design and implementation, to testing of facility. Good slides and presentation.  
Comments: Uncertain if travel charges or honorarium are necessary.
7. Speaker: Jim Schlachter  
Company: Systecon  
Address: 6121 Schumacher Park Drive  
Westchester, OH 45069  
Phone: (513) 463-2239  
Topic: How Advances in Digital Electronics Effects Pumping Systems  
Abstract: Company works with controls of variable speed pumping systems, specifically algorithms which allow for operating system at most efficient point.  
Comments: Willing to travel and without reimbursement locally.
8. Speaker: Joe Koehn  
Company: Twin City Fan Companies, Ltd.  
Address: 5959 Trenton Lane  
Plymouth, MN 55442-3238  
Phone: (763) 551-7631
- Topic: Fan and System Interaction  
Abstract: Problems that arise when interactions between fans and system components that are primal to the inlets and outlets of these fans are not considered in overall system design. Several examples were given that were not obvious until the system was started and did not operate properly.  
Comments: Willing to travel and without reimbursement locally

# ASHRAE College of Fellows Speaker's Bureau

Prototype

# Expand List of Speakers

- Complement to Dist. Lecture program
- Lists ASHRAE Fellows willing to speak to Chapters and Region CRC's
- Patterned after DL program but web based



# ASHRAE Program Chairs

- Go to ASHRAE COF Website
- Lists ASHRAE Fellows presenters
  1. Contact Data
  2. Available Speeches
  3. Presentation Feedback

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[New Fellows](#)

[Fellows Selection Guidelines](#)

[MOP](#)

[Bylaws](#)

[Members](#)

[2005 June Meeting](#)

## College of Fellows Speakers Bureau

### Speakers Information

- [Names, member number, city, state, country](#)
- [Full Contact Details](#)

For speakers only

- [Add a speaker](#)
- [Edit existing speaker info](#)

### Speeches

- [List by keyword](#)
- [List by Geographical Area](#)

For speakers only

- [Add a speech](#)
- [Edit a existing speech \(need speech number\)](#)

### Presentations

- [List of presentations](#)

For Chapter/Regional Program Chairs

- [Add a review](#)
- [Edit an existing review \(need presentation number\)](#)



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## ASHRAE College of Fellows Speakers Bureau - Speeches listed by Keyword

Speech ID	Speaker ID	Keyword	Subject	Abstract	Related Organization	Related Ashrae TC	Travel Without Reimbursement	Travel With Transportation	Travel With Travel	Travel With Travel Honorium	Preferred Weeks Notice	Required Weeks Notice
3	3	CO2, Global Warming	Trading Credits		EPA		region 3	east coast	n.a.	n.a.		
2	4	Noise	Software Sound Predictions	Covers how to predictively design quiet (<NC40) spaces		2.6	ky, ohio	region 7	north america	world	12	4
1	4	Noise	Room Sound Predictions	Covers how to use predictive acoustics in Classroom Designs	ASA	2.6	ky, ohio	region 7	north america	world	12	4



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## ASHRAE College of Fellows Speakers Bureau - Speeches listed by Geographical Area

Speech ID	Speaker ID	Keyword	Subject	Abstract	Related Organization	Related Ashrae TC	Travel Without Reimbursement	Travel With Transportation	Travel With Travel	Travel With Travel Honorium	Preferred Weeks Notice	Required Weeks Notice
2	4	Noise	Software Sound Predictions	Covers how to predictively design quiet (<NC40) spaces		2.6	ky, ohio	region 7	north america	world	12	4
1	4	Noise	Room Sound Predictions	Covers how to use predictive acoustics in Classroom Designs	ASA	2.6	ky, ohio	region 7	north america	world	12	4
3	3	CO2, Global Warming	Trading Credits		EPA		region 3	east coast	n.a.	n.a.		



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## ASHRAE College of Fellows Speakers Bureau - List of all Presentations

Presentation ID	Speech ID	Presentation Date	Presentation Location	Presented to whom	Contact Name for Presentation	Contact Email for Presentation	Comments
1	1	12/15/2005	Lexington, Ky	BlueGrass Chapter	Greg Smith	859.222.3333	Great presentation. Non commercial. 40 minutes. For general chapter. Recommended for Chapters.
5	1	12/15/2001	Region V CRC	BlueGrass Chapter	Greg Smith	859.222.3333	Great presentation. Non commercial. 40 minutes. For general chapter. Recommended for Chapters.
6	1	10/02/2005	Orlando	Ashraecof	Nancy Hallstrom	847.224.9665	You should have this presentation
7	2	01/02/2005	Lexington, Ky	Bluegrass chapter	Rick Larson	847.540.3445	Great presentation. current info. good for any chapter.

# INPUTS

- SPEAKERS
- SPEECHES
  - Subject, distance, cost
- PRESENTATIONS FEEDBACK

## ASHRAE College of Fellows Speakers Bureau - Add a Speaker

Please input your contact data for program chair to review (*\* - Required, other fields are optional*)

* ASHRAE Member ID	<input type="text"/>	<i>(If not an ASHRAE member, input 00)</i>
*ASHRAE Grade	Fellow <input type="button" value="v"/>	<i>Choose one</i>
Are you a College of Fellows Member?	Yes <input type="button" value="v"/>	<i>(Optional)</i>
*First Name	<input type="text"/>	
Nickname	<input type="text"/>	<i>(Optional. If not input, your first name becomes nickname)</i>
*Last Name	<input type="text"/>	
*Preferred Phone Number	<input type="text"/>	
*Preferred Email	<input type="text"/>	
Preferred Email (2)	<input type="text"/>	<i>(Optional)</i>
* Business Name	<input type="text"/>	<i>(Company, retired, etc.)</i>
* Street Address	<input type="text"/>	
*City	<input type="text"/>	
* State/Providence	<input type="text"/>	
* Postal Code	<input type="text"/>	
* Country	<input type="text"/>	
County	<input type="text"/>	<i>(Optional)</i>
Associations you belong to	<input type="text"/>	<i>(Optional)</i>
Certifications/Positions you hold	<input type="text"/>	<i>(Optional)</i>
Schools/Degrees	<input type="text"/>	<i>(Optional)</i>

## ASHRAE College of Fellows Speakers Bureau - Add a Speech

Speaker ID

Subject

Keyword(s)

Abstract

Related Organization

Related ASHRAE TC

Travel without reimbursement  *(list ASHRAE Regions, States, or Geographical Areas)*

Travel without reimbursement  *(list ASHRAE Regions, States, or Geographical Areas)*

Travel without reimbursement  *(list ASHRAE Regions, States, or Geographical Areas)*

Travel without reimbursement  *(list ASHRAE Regions, States, or Geographical Areas)*

Notice Preferred (Weeks)

Notice Required (Weeks)



## ASHRAE College of Fellows Speakers Bureau - Add Presentation Review

Speech ID  *Speaker ID is 6 digits*

Date of Presentation  *mm/dd/yyyy*

Where  *City, State*

For Whom  *Chapter name*

Presentation Feedback Name  *Name of the person providing this feedback*

Presentation Feedback Email  *Email address of the person providing the feedback*

Recommend Speaker  *Insert check mark if you recommend the speaker*

Recommend Topic  *Insert check mark if you recommend the topic*

Average Rating  *Insert a rating from 01-100. 100 being the best.*

Comments

Submit

Reset

Speech ID	Speaker's Last Name	Speaker's First Name	Member ID	Subject	Keyword
3	Dawson	Bob	88888888	Trading Credits	CO2, Global Warming
1	Hallstrom	Art	29340999	Room Sound Predictions	Noise
2	Hallstrom	Art	29340999	Software Sound Predictions	Noise

# CTTC Committee will be involved

- 3 COF members have volunteered
- All are in charge of DL program
  - Ben Crowley
  - Monte Troutman, B.C. Engineering
  - Charles Gulledge, III, AC Corporation
  - + Rosy Douglas ASHRAE HQ

Topic	Region	Chapter	Program Chair	Recommend?	Average Rating	Speaker	Company
Duct Cleaning	NE	BI	Joseph Trongone	Yes	80	James Ryan	Airstream Enterprises
Direct Fired Make-up Air Systems	NE	BI	Joseph Trongone	Yes	90	Chris Catan	Catan Energy Systems
Smoke Purge Systems	NE	BI	Joseph Trongone	Yes	100	Evans Lizardos	Lizardos Engineering & Associates PC
Noise and Vibration	NE	BI	Joseph Trongone	Yes	90	Jim Soulopulos	Mason Industries Olmsted Environmental Services
Germ Containment	NE	BI	Joseph Trongone	Yes	100	Edward Olmsted	
Sizing Service Water Systems	NE	BI	Joseph Trongone	Yes	80	Charles Jensen	PVI
SMACNA Crossfire Panel Discussion	NE	BI	Joseph Trongone	Yes	90	Eli P Howard	SMACNA
Tour of SMACNA Training Facility	NE	BI	Joseph Trongone	Yes	75	Larry Sturgis	Sturgis Mechanical Vogel/Taylor Engineers LLP
Ventilation Codes	NE	BI	Joseph Trongone	Yes	80	Chet Vogel PE	
Refrigeration Piping Design and Application	NE	BI	Joseph Trongone	Yes	90	Steve Friedrich	York International
Design and Installation Pitfalls	NE	BI	Joseph Trongone	Yes	95	Panel Discussion	
Legionella and IAQ	NE	CNY	Steve Miller	Yes	92	Frank Rosa	Aqua Tech Svcs.
Overview of Shipboard Refrigeration and AC	NE	CNY	Steve Miller	Yes	92	Kevin Glover	Carrier
Tour of Fulton Boiler Plant	NE	CNY	Steve Miller	Yes	85	John Ashby	Fulton Boiler
Geothermal Heat Pumps	NE	CNY	Steve Miller	Yes	78	Bob & Dave Mancini	Geothermax Inc. M&I Heat Transfer Products
Custom Air Handlers	NE	CNY	Steve Miller	Yes	85	Dipti Datta	
Earth Coupled Heat Exchangers	NE	CNY	Steve Miller	Yes	87	Ellis Guiles	Northeast Distributors

Topic	Region	Chapter	Program Chair	Recommend?	Average Rating	Speaker	Company
Refrigerants	NE	CNY	Steve Miller	Yes	92	Tom Boswell	Northeast Distributors
Conventional Fuels from an Historic "Alternative Fuel" Perspective	NE	CNY	Steve Miller	Yes	88	Clay Smith	Otisea Industries
Brewery Tour	NE	CNY	Steve Miller	Yes	92	NA	
Historical Perspectives from 5 Speakers	NE	CNY	Steve Miller	Yes	95		
Panel Discussion: System Commissioning and Start-up	NE	CNY	Steve Miller	Yes	93	Various	
Syracuse Metro IEQ Project	NE	CNY	Steve Miller	Yes	90	Panel Discussion	
Earthquakes, HVAC Systems and Seismic Codes	NE	CT	Julia Weatherby	Yes	89	Patrick Lama	Mason Industries
Seismic Code per IBC 2000	NE	CT	Julia Weatherby	Yes	93	Patrick Lama	Mason Industries
Tour of Insurance Data Center	NE	CT	Julia Weatherby	Yes	100	Joe Tadaro	Aetna Insurance
Conflict Resolution Techniques	NE	CT	Julia Weatherby	Yes	85	Bill Logue	Training Consultant and Mediator
Intro to Combustion Theory, Control and Boiler Efficiency	NE	CT	Julia Weatherby	Yes	95	Peter M. Cloonan	Preferred Utilities
Air to Air Heat Exchngers	NE	CT	Julia Weatherby	Yes	80	Patrick Turcan	BKM
Demand Controlled Ventilation	NE	CT	Julia Weatherby	Yes	85	John Lauria	Carrier UTC
The C-5 Cargo Plane's HVAC System	NE	CT	Julia Weatherby	Yes	98	Byron Labreche	Westover Air Force Base
Tour of C-5 Cargo Plane	NE	CT	Julia Weatherby	Yes	100	Byron Labreche	Westover Air Force Base



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David Underwood, P.Eng. Fellow ASHRAE, CPMP  
President

100 Lakeshore Rd. E., Apt. 607  
Oakville, Ontario L6J 6M9  
Tel: 416.948.8902  
dunderwood@hvacrtdu.com

Date: September 16, 2015

To: Bill Walter  
Jennifer Isenbeck  
Farooq Mehboob

Subject: Chapter Region Society Connections

Review strategies of how other organizations link the local chapters/branches with the Society (e.g. American Chemical Society, American Society of Mechanical Engineers, and United States Green Building Council).

Discuss CRC format with other DRCs at Society Winter and Annual Conference to compare what works best for each region with a focus on connecting the Society and the Chapter.

Prepare a short presentation on the role of the Region that can be used by RVCs and the DRC during Chapter visits that would:

- Make the chapter members aware that the Regional officers serve on committees at the Society and are their link to the Society.
- Communicate the results of CRC motions that are passed on to Society so that they realize the chapter members can influence how the Society operates.

Highlight ways chapter members can get involved with the Society-level activity even if they cannot attend the Society Conferences.

A report to the BOD with recommendations will be expected for the ASHRAE Annual meeting in St. Louis.

Thank you for your continuing work for ASHRAE.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Underwood", written in a cursive style.

T. David Underwood, P.Eng.  
President

cc: Board of Directors

**Report to ExCom  
From Technology Council  
January 27, 2016**

**Motions Requiring ExCom Approval:**

1. Technology Council recommends that BOD ExCom authorize starting a revision of the *Environmental Tobacco Smoke (ETS) Position Document (PD)*.

**BACKGROUND:** The proposed title, purpose and scope (TPS) is included below. Revisions are shown compared to the published position document TPS.

**Title:** Environmental Tobacco Smoke (ETS)

**Purpose:** To inform ASHRAE membership and the public about the health effects of ~~involuntary secondary~~ exposure to ~~tobacco~~ smoke from the combustion of tobacco.

**Scope:**

- Define what is meant by ETS, passive smoke, and ~~involuntary secondary~~ exposure to smoking
- Describe the types of indoor environments where ETS exposure might occur.
- Reference health effects associated with ~~involuntary secondary~~ exposure to tobacco smoke.
- Report on worldwide efforts to reduce/restrict ~~involuntary secondary~~ exposure.
- Recommend that ASHRAE members follow the guidance available in local/state code and/or ASHRAE documents/standards.

The current PD expires June 25, 2016. The revision would get 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.

**VOTE:** 9-0-0-2<sup>1</sup>, CNV

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<sup>1</sup> Michael Burgess and Julia Keen were absent.



## CRC SCHEDULE 2016-2017

<b><u>FALL 2016</u></b>	<b>HOST CHAPTER LOCATION</b>	<b>ALTERNATE CHAPTER LOCATION</b>	<b>TARGET MONTH/WEEK</b> (1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> week, etc.)	<b>ACTUAL CRC DATES</b>	<b>OFFICIAL VISITOR</b>	<b>STAFF</b>	<b>CRC CHAIR</b>
<b>REGION I</b>	ROCHESTER ROCHESTER, NY	LONG ISLAND GARDEN CITY, NY	AUGUST 3 <sup>RD</sup> WEEK	AUGUST 18-20	WENTZ/CHAKROUN	WRIGHT	JIM BROWE
<b>REGION II</b>	NB/PEI MONCTON, NB		AUGUST 4 <sup>TH</sup> WEEK	AUGUST 26-28	HAYTER/SCOGGINS	ABRAMS	DAN BOUDREAU
<b>REGION III</b>	PHILADELPHIA PHILADELPHIA, PA	ROANOKE ROANOKE, VA	AUGUST 3 <sup>RD</sup> WEEK	AUGUST 18-20	HAYTER/TSUI	MITCHELL	GARY DEBES
<b>REGION IV</b>	ATLANTA ATLANTA, GA	SOUTH CAROLINA COLUMBIA, SC	AUGUST 2 <sup>ND</sup> WEEK	AUGUST 11-13	WENTZ/TSUI	LITTLETON	BRIAN JUSTICE
<b>REGION V</b>	DAYTON DAYTON, OH		JULY 4 <sup>TH</sup> WEEK	JULY 28-30	WENTZ/SCOGGINS	ABRAMS	EVAN NUTT
<b>REGION VII</b>	BIRMINGHAM BIRMINGHAM, AL		AUGUST 1 <sup>ST</sup> WEEK	AUGUST 4-6	OLESEN/SCOGGINS	COMSTOCK	CHRIS GRAY GREG HAMAKER
<b>REGION IX</b>	NEBRASKA OMAHA, NE	KANSAS CITY KANSAS CITY, MO	AUGUST 1 <sup>ST</sup> WEEK	AUGUST 4-6	WENTZ/GRAEF	LITTLETON	TYLER GLESNE
<b>REGION X</b>	SOUTHERN CALIFORNIA LOS ANGELES, CA		AUGUST 3 <sup>RD</sup> WEEK	AUGUST 11-13	OLESEN/CHAKROUN	GURLEY	CHRISTINE LAZO
<b>REGION XII</b>	SOUTHWEST FLORIDA FORT MEYERS, FL	BRASIL SAO PAULO, BRAZIL	AUGUST 3 <sup>RD</sup> WEEK	AUGUST 4-6	HAYTER/CHAKROUN	RAMSPECK	RICHARD BROOKS
<b>REGION XIII**</b>	THAILAND BANGKOK, THAILAND	SINGAPORE SINGAPORE	AUGUST 4 <sup>TH</sup> WEEK	SEPT 30 – OCT 2	ALL OFFICERS	ALL DIRECTORS ADELEMANN MASTERSON	APICHIT LUMLERTPONGPANA
<b>RAL**</b>	THAILAND BANGKOK, THAILAND	SRI LANKAN COLOMBO	SEPTEMBER 3 <sup>RD</sup> WEEK	SEPT 30 – OCT 2	ALL OFFICERS	ALL DIRECTORS ADELEMANN MASTERSON	PANKAJ DHARKAR
<b><u>SPRING 2017</u></b>	<b>HOST CHAPTER LOCATION</b>	<b>ALTERNATE CHAPTER LOCATION</b>	<b>TARGET MONTH/WEEK</b> (1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> week, etc.)	<b>ACTUAL CRC DATES</b>	<b>OFFICIAL VISITOR</b>	<b>STAFF</b>	<b>CRC CHAIR</b>
<b>REGION VI</b>	ST LOUIS ST LOUIS, MO		MAY 1 <sup>ST</sup> WEEK	APRIL 27-29	WENTZ/GRAEF	PETTIGREW	BRIAN INGENTHON
<b>REGION VIII</b>	CENTRAL OKLAHOMA OKLAHOMA CITY, OK	ALAMO SAN ANTONIO, TX	APRIL 4 <sup>TH</sup> WEEK	APRIL 27-29	OLESEN/TSUI	COMSTOCK	JOHN SEMTNER JOE SANDERS
<b>REGION XI</b>	PUGET SOUND SEATTLE, WA	VANCOUVER ISLAND VICTORIA, BC	MAY 2 <sup>ND</sup> WEEK	MAY 17-20	OLESEN/GRAEF	GUPTA	TAMAS BENCSEK

Additions and/or revisions are shaded. \*\* Joint CRC Regions

Revised: March 20, 2016

Distribution: EXCOM, DRCS, LITTLETON, TOWNSEND, COMSTOCK, WRIGHT, ABRAMS, RAMSPECK, GUPTA, MITCHELL, ADELMANN, PETTIGREW, GURLEY, MASTERSON, SCARBOROUGH, GRANT, KELLER, RATCLIFF

Key Performance Indicators Snapshot				November 2015			
		Compare to last year		FISCAL YEAR 2015-16			
Publications (All) Sold	2,410	↑	46%	Non-Dues Revenue (in thousands)			
ASHRAE.org Visits	107,826	↑	5%	Nov. actual	Nov. budget	% of budget	
Education Registration	438	↑	90%	\$625	\$756	83%	
Certification Applications	42	↑	17%	YTD actual	YTD budget		
Media Placements	883	↑	82%	\$4,098	\$4,033	102%	
Ads Sold (All)	1,216	↑	279%				
Conference Attendance	460	↓	-18%				
<b>Publications</b>							
Publication Type	Print			Electronic			
	Nov. 2015	YTD 2015-16	YTD 2014-15	Nov. 2015	YTD 2015-16	YTD 2014-15	
Books/papers/articles	960	6,533	6,392	313	1,705	1,881	
Standards	585	3,269	2,890	552	3,992	2,215	
AEDGs (life to date)		ASHRAE.org Visits					
Total Downloads	Print	Views				Visits	
559,471	26,133	Nov. 2015	Nov. 2014	YTD 2015-16	YTD 2014-15	Nov. 2015	Nov.2014
		371,364	356,410	1,882,562	1,810,999	107,826	102,595
<b>ASHRAE Learning Institute</b>							
		Nov. 2015	Nov. 2014	YTD 2015-16	YTD 2014-15		
Attendees at instructor-led online seminars		59	66	220	257		
Attendees at instructor-led seminars at ASHRAE conferences		0	0	0	0		
Attendees at in-company, chapter, industry events seminars		432	180	889	1,148		
eLearning course purchases		82	56	830	373		
Totals		573	302	1,939	1,778		
<b>Certification</b>							
Applications Received	Apps. Rcvd. Nov. 2015	Apps. Rcvd. Nov. 2014	LTD % passage	Exams Taken YTD 15-16	Exams Taken YTD 14-15	Certs. Earned YTD 15-16	Certs. Earned YTD 14-15
Building energy assesstmt. (BEAP)	1	2	79.8	161	160	110	108
Building energy modeling (BEMP)	2	9	67.9	<div style="text-align: center;"> <b>Key Dates</b>                       2016 Winter Conference                      Jan. 23-27                      Orlando                       Sixth International Conference on Energy Research and Development                      March 14-16                      Kuwait                       ASHRAE Webcast                      Making Net Zero Net Positive                      21-Apr                 </div>			
Commissioning (CPMP)	17	5	83.8				
High performance building (HBDP)	3	1	63.9				
Healthcare design (HFDP)	4	5	81.1				
Operations/maintenance (OPMP)	0	1	54.8				
Totals	27	23					
PR Activity							
	Nov. 2015	Nov. 2014	YTD 2015-16	YTD 2014-15			
Releases	6	6	35	30			
Pitches	1	2	47	2			
Inquiries	1	13	30	61			
Placements	883	485	4,801	3,839			
<b>Advertising Sold - Journal/HPB/ASHRAE.org</b>							
	Nov. 2015	Nov. 2014	YTD 2014-15	YTD 2013-14			
Print ads	43	42	293	266			
Digital ads	1,173	279	6,209	1,424			
<b>2016 Winter Conference</b>							
	Member Paid	Non-Mem. Paid	Reduced fee	Comp	Total	Cumulative	
Nov. 2015	250	19	137	54	460	1,159	
Nov. 2014	223	19	175	147	564	1,150	



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## Marketing/PR Dashboard Legend

All activities reflect comparisons by month and year for current fiscal year vs. previous fiscal year

**LTD:** life-to-date

**Non-dues revenue:** comparison of non-dues revenue (in thousands) actual to budget.

**Publications:** comparison of sales (print and electronic download) of publications (books, papers and articles) and standards.

**ASHRAE.org Site Traffic:** Views represents the number of times pages on ASHRAE.org are viewed; visits represent the unique number of visitors to ASHRAE.org.

**ALI Student Count:** The number of attendees at courses offered under ASHRAE Learning Institute; eLearning reflects the monthly number of courses purchased (which may include individuals who purchased more than one course)

**PR Activity:** A release is a news release issued by ASHRAE. A pitch is a contact by ASHRAE to a reporter regarding a possible story angle. An inquiry is a contact by a reporter to ASHRAE seeking information on an activity. Placements refer the number of times ASHRAE is mentioned in magazines and newspapers (both print and electronic).

**Certification Applicants:** Indicates number of applications received for specific certification programs. Does not include individuals who earned a certification by virtue of serving on an examination development subcommittee.

Healthcare Facility Design Professional (HFPD)- launched June 2007

High Performance Building Design Professional (HBDP) - launched June 2008

Operations and Performance Management Professional (OPMP)- launched Jan. 2009

Commissioning Process Management Professional (CPMP) - launched June 2009

Building Energy Modeling Professional (BEMP) - launched Jan. 2010

Building Energy Assessment Professional (BEAP) - launched Jan. 2011

**Advertising:** Reflects number of ads sold in ASHRAE Journal, HPB and ASHRAE.org, both print and digital formats.