

**Building EQ Committee  
Long Beach Annual Meeting  
Sunday, June 25, 2017**

**These draft minutes have not been approved and are not the  
official record until approved by this committee.**

**Members Present:** Hoy Bohanon (chair), Hugh Crowther (vice-chair), Darryl Boyce, Nate Boyd, Hywel Davies, Charles Eley, Julia Keen, Ross Montgomery, Shanta Tucker, Edward Tsui (coordinating officer)

**Not available:** Harry Misuriello, Dan Nall, Esteban Baccini, Kushagra Juneja, Jaap Hogeling, Bruce Hunn

**Staff:** Lilas Pratt (staff liaison), Vanita Gupta, Joslyn Ratcliff, Alice Yates

**Guests:** Stephen Roth, Bill Klock, Bill Dean, John Dunlap, Michael Brandemuehl, Ron Gagnon, Chuck Scott, David Burchfield, Eric Yang, Chris Balbach, Chris Hsieh, James Gallick, Francisco Gomez, Billy Austin, Tim McGinn

**Principal Motions<sup>1</sup>**

**Motion 1:** Crowther moved and Boyce seconded that the minutes of all listed meetings be approved as a consent agenda.

**Vote:** Motion passed without objection.

**New and Open Action Items**

**June 25, 2017 Long Beach Annual Meeting**

- **AI 1: Pratt** to get with Steve Comstock regarding licensing the Architecture 2030 API
- **AI 2: Pratt** to add discussion on metered energy and data centers to Methodology Subcommittee agenda for their next meeting.
- **AI 3: Pratt** to work with Eley to create new EEM measure payback ranges for Stephen Roth.
- **AI 4: Committee** to create improved descriptions/language for the EEMs.
- **AI 5: Pratt** to draft an interpretation request on Standard 214 for the review by the committee.
- **AI 6: Methodology** to look at how to address Data Centers and using PUEs
- **AI 7: Pratt** to compile a detailed list of what would need to be added to Building EQ In Operation rating in order to comply with Standard 211P
- **AI 8: Business Development** to create a model of the web portal output/report possibly aligned with the outputs for Standard 211P.
- ✓ **AI 9: Business Development** to create content for the CRC PowerPoint slides.
- **AI 10: Business Development** to consider a name for the web portal if needed.
- **AI 11: Business Development** to create a Web Portal Launch Plan through December 2017:
  - Include ideas from brainstorming session
  - Breakdown deliverables, dates, and PIC
- **AI 11: Committee** to add French and Spanish to the Web Portal after initial launch.

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<sup>1</sup> All votes are recorded as yes-no-abstain.

### January 29, 2017 Las Vegas Winter Meeting

- **AI 1: Building EQ Committee** to develop a median EUI for laboratory buildings.
  - **1c: Bruce Hunn** to track progress on development of laboratory variables affecting energy use
  - **1e: Methodology Subcommittee** (or designee) to analyze the data on laboratory energy use via regression analysis to determine significant energy factors and establish equation for determining median by September 2017 for use by initial participating campuses in the Adapt bEQ course.

### December 2, 2016 Monthly Web Meeting

- **AI 1: ~~Reports and Sales Subgroups~~ Business Development SubC** to review products to see if there are other products/reports that can be sold to users (e.g., certificates).
- **AI 2: ~~Sales subgroup~~ Business Development SubC** to determine pricing strategy for reports and labels, considering volume, users, location, selected partners, etc.
- **AI 3: ~~Bohanon, Crowther~~** to address production and quality control as the process moves from worksheets to on-line data entry.

### September 20-21, 2016 Atlanta Interim Meeting:

- **AI 4: Eley/Bohanon** to finalize the ventilation rate data for the COMNET website.
- **AI 8: Pratt** to send **Boyd** a copy of the workbooks for the first full IO/AD awarded to city of Orlando buildings for use in determining web portal outputs.

### January 24, 2016 Orlando Winter Meeting:

- **AI 3: Methodology Subcommittee** to explore the DOE Asset Score and report back to the full committee. (On-going)

## Meeting Minutes

1. Call to Order – **Meeting convened at 8:34am PDT / Quorum was present**
  - a. [Committee purpose and scope](#)
  - b. [Committee structure and roster](#)
  - c. Introductions
2. Coordinating Officer Report
  - Mr. Tsui thanked the committee for their time and efforts and reported that many ASHRAE members are waiting for the launch of the web portal.
  - He also noted that there is increasing international interest, so the addition of other languages and the ability to use either IP or SI units is important.
3. New Business
  - a. Approval of minutes from January 29, 2017 meeting  
([bEQ\\_29Jan2017\\_MtgMinutes.pdf](#))
  - b. Approval of minutes from monthly calls  
([bEQ\\_17Mar2017\\_MonthlyCallMtgNotes.pdf](#))  
([bEQ\\_7Apr2017\\_MonthlyCallMtgNotes.pdf](#))  
([bEQ\\_5May2017\\_MonthlyCallMtgNotes.pdf](#))  
([bEQ\\_2Jun2017\\_MonthlyCallMtgNotes.pdf](#))

**Motion 1:** Crowther moved and Boyce seconded that the minutes of all listed meetings be approved as a consent agenda.

**Vote:** Motion passed without objection.

4. Methodology Subcommittee Report

a. Online portal project update

- Mr. Roth provided a demonstration of the web portal showing the progress to date. The Alpha/Beta test was discussed and the committee made a number of initial suggestions based on the demonstration.
- Moving forward several items will need to be addressed including:
  - Address payment processing, validation, and help
  - Determine outputs
  - Determine direction for info on publically available and personal dashboards
  - Determine if an license is required with Architecture 2030 for use of their API

b. Energy End Use (Pie Chart Form)

- Mr. Eley recapped the subcommittee's discussion on the Energy End Use form in the portal. The committee would like to make this form more usable which would require adding some additional information fields. The changes needed to do this may be beyond the scope of the current project, so the portal will initially launch with the form as it currently is in the workbooks.

c. Comparison of Building EQ to Standard 214

- Mr. Eley reported that the subcommittee did a thorough comparison and determined that Building EQ meets all the requirements of Standard 214 with two exceptions: calculated energy use is permitted and data up to 8 years old is allowed in Std 214.
- It was suggested that an official interpretation be requested as 214 is intended to be a minimum standard, so Building EQ should be allowed to be more stringent.
- The committee discussed how to handle data centers. This is a concern considering the number of these that have sprung up over the years, especially on college campuses.

d. How to rate Laboratory Buildings

- Mr. Eley updated the committee on the progress of this investigation.
- Mr. Hunn has been in contact with TCs 9.7 and 9.10 in regards to what energy drivers should be captured to accurately assess energy usage in lab buildings. These drives include: lab type, gross floor area of total bldg., gross floor area of lab to whole building, operating hours of both lab and building, number of hoods.
- The work on this initiative is on-going.

e. DOE Building Energy Asset Score

- Discussion deferred
- Mr. Boyd noted that the DOE Asset Score currently has a number of bugs.

f. Updates to Ventilation Rate Data on COMNET website

- Chair Bohanon has now sent to Mr. Eley a table of values from a previously proposed addendum to 62.1. The addendum has since been modified to remove the table and is in process for public review this fall, but the table values are much more accurate than what was previously used by COMNET. The plan is to use that table.

5. Marketing Subcommittee Report

a. Rollout Building EQ Subgroup Update

- Mr. Crowther reported on the work of this subgroup including the newly created fact sheets and the “feel-good” overview video that is now in progress.
- b. Drive the Sales Plan Subgroup Update
    - Mr. Crowther reviewed progress with the initial targets for marketing Building EQ including APPA, Canadian Federal government, Hydro Quebec, and City of Edmonton.
  - c. Marketing Input to Web Portal Subgroup Update
    - The committee briefly discussed what outputs were included as part of the project scope and what types of reports might be desired moving forward.
  - d. Licensee Program Business Plan Subgroup Update
    - Discussions have been on-going with Orlando city/utilities regarding what they would expect from a license program and what they would pay for it.
    - GGAC has an MBO under Policy and Programs that will work on that and report back to the Building EQ committee.
  - e. Moving forward
    - Mr. Crowther provided an overview of the business development strategy discussion and brainstorming sessions from the Marketing subcommittee meeting on Saturday.
    - Business development strategy is a multi-prong approach targeting three main areas (ASHRAE members, institutional customers, and the licensee program).
    - Three geographical areas are targeted initially: North America, Quebec, South America.
    - The brainstorm sessions provided ideas for the web portal rollout including: CRC presentations, leveraging of the various ASHRAE communication outlets to announce the web portal launch, an updated DL presentation, initiatives tied to APPA (Journal article, case study), new Building EQ brochure, webinar with PDH credits.
    - There is opportunity for articles in the APPA journal as well.
    - Ideas for training include: short (1-5 minute) videos on web portal operation, PDC course based on Building EQ.
    - The committee discussed the value proposition for Building EQ which is clear for the In Operation rating, but not so clear for the As Designed rating.
    - For the In Operation rating:
      - Building EQ is a better, easier way to get an Energy Audit and you get more as well.
      - The value is not the score itself, it is what you do with the score – the score is the starting point, Building EQ is a way to make the building better
    - Mr Boyd noted that TC 7.6 is initiating an RTAR for a project to standardize nomenclature on Energy Efficiency measures. This may be useful to the committee..

## 6. Other Business

- a. Building EQ on University Campuses
  - Mr. Brandemuehl reported on the Presidential Ad Hoc on Adapt bEQ for student branches, which was convened to develop a University course on Benchmarking and Energy Performance using building EQ as framework for hands on learning. The Adhoc included members from bEQ, student activities, and the PDC communities. The intent was to make the final course available to student branches
  - The course is intended be a collaboration between the university professors, the local ASHRAE community, and facility managers at the university; and includes classroom instruction, field trips, and five weeks of field work/ energy audits using the Building EQ framework.

- The classroom material consists of 13 lectures as PPTs covering introductory material, energy usage in buildings, benchmarking, Level 1 energy audits and walk-through analysis, and EEMs.
  - The course will be piloted over the next year in partnership with APPA in 18+ universities who are interested in offering the course. The ASHRAE student branch contacts, academic contacts, and the APPA contacts have been collected for each of these universities.
  - It is unclear, from an ASHRAE perspective, where the proper home for this course is moving forward.
  - Access is now available: publicly available general information, registration required for sample course materials, licensing agreement needed to get access to full course information.
- b. APPA Partnership
- Chair Bohanon recognized the ASHRAE-APPA partnership and the support that APPA has shown for Building EQ.
  - APPA president, Chuck Scott, expressed APPA's appreciation for the opportunity to work closely with ASHRAE on Building EQ and the university course.
  - APPA will continue to promote the program with their members.
- c. ASHRAE Research Project 1771-RP
- Mr. Brandemuehl reported on 1771-RP (Energy modeling for Building EQ) which is trying to reconcile design standards for new construction (90.1 and 189.1) with information such as the CBECS data for existing buildings.
  - This is a two year project that is about one year in and about 3 months behind schedule.
  - The PMS has just received an interim report describing protocols to do the modeling.
  - Michael Deru will be taking over as chair of the PMS which will meet next in in July or August.
- d. Comparisons with Standards 214 and 211
- The committee needs to agree on a strategy to align with these standards.
  - The committee agrees that there is value in coordinating with the reporting requirements for Standard 211.
- e. Update on LEED Alternative Compliance Path Proposal
- No update at this time.
- f. Translations
- The Quebec French Translation is now complete and is being put back together. ASHRAE should get that back by mid-July. Two submissions using the translated workbooks are expected by this Fall.
  - A day on the hill was held with the Canadian federal government where bEQ was a topic of discussion.
  - Esteban Baccini has been asked to spearhead an effort by the Argentina Chapter to create a Spanish Translation.
  - It was suggested that there be a placeholder for a 3<sup>rd</sup> language opportunity in Dubai as ASHRAE now has a training center there.

## 7. Liaison Reports – Discussions deferred

- a. Standard 90.1
- b. Standard 189.1

- c. Standard 100
- d. Standard 62.1
- e. Standard 211P
- f. GGAC – Boyd
- g. Technical Committees

8. Closing comments

- Chair Bohanon praised the committee for their good work this past year and thanked them for their support. Certificates were given to members rolling off the committee thanking them for their service.

9. Incoming Chair – Hugh Crowther

- Mr. Crowther briefly discussed the Building EQ budget for SY 2017-2018 as well as the expected MBOs for the year.
- Mr. Crowther also noted the [subcommittee assignments](#) for the upcoming year.

10. Upcoming Meetings

- Interim meeting planned for Fall 2017 (October 16-17)
- Monthly conference call web meetings

11. Adjourn – **Meeting adjourned at 11:28 am PDT**

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## **bEQ Scope, Purpose and Operation**

This committee is responsible for the business planning, training and marketing of the programs of this enterprise. This committee has the overall responsibility to determine technical developments that are required to support these activities. This committee has the responsibility for directing the development of marketing programs to determined target audiences.

The committee shall report to the Board of Directors.

This committee is responsible for the operation of the BEQ enterprise as determined by the Board and for coordinating the activities of all three councils regarding the ASHRAE Building Labeling program.

## **bEQ Committee Structure – FY 2016-2017**

**bEQ Committee Members (voting):** Hoy Bohanon (Chair), Hugh Crowther (Vice-chair), Julia Keen (Tech Council Representative), Darryl Boyce (Pub-Ed Council Representative), Charles Eley (Member-at-Large), Nate Boyd (Member-at-Large), Harry Misuriello (Member-at-Large), Hywel Davies (Member-at-Large),

**bEQ Consultants/Others (non-voting):** Esteban Baccini, Jaap Hogeling, Bruce Hunn, Kushagra Juneja, Ross Montgomery, Dan Nall, Shanta Tucker, Edward Tsui (Coordinating Officer)

Methodology subcommittee: Charles Eley (chair), Hoy Bohanon, Harry Misuriello, Dan Nall, Bruce Hunn, Shanta Tucker

Marketing Subcommittee: Hugh Crowther (chair), Darryl Boyce, Julie Keen, Nate Boyd, Hywel Davies, Jaap Hogeling, Kushagra Juneja, Ross Montgomery, Edward Tsui

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**bEQ Committee Members (voting):** Hugh Crowther (Chair), Bill Klock (Vice-chair), Bill Dean (Tech Council Representative), Shanta Tucker (Pub-Ed Council Representative), Charles Eley (Member-at-Large), Nate Boyd (Member-at-Large), Esteban Baccini (Member-at-Large), Hywel Davies (Member-at-Large),

**bEQ Consultants/Others (non-voting):** Jeff Clarke, John Dunlap, Bruce Hunn, Ross Montgomery, Edward Tsui (Coordinating Officer)

Executive Subcommittee: Hugh Crowther (chair), Bill Klock, Charles Eley, Ross Montgomery

Methodology subcommittee: Charles Eley (chair), Bruce Hunn, Shanta Tucker, Hywel Davies

Business Development subcommittee: Ross Montgomery (chair), Nate Boyd, Esteban Baccini, Jeff Clarke, Bill Dean, John Dunlap

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