

bEQ Committee
Atlanta Interim Meeting – May 21-22, 2015
Meeting Notes

Members Present: Ross Montgomery, Michael Brandemuehl, Hoy Bohanon, Larry Markel (by phone), Harry Misuriello, Charles Eley, Tim Wentz (coordinating officer)

Not available: Ray Patenaude, Filza Walters, Dan Nall, Hywel Davies

Guests: Wayne Stoppelmoor (by phone)

Staff: Lilas Pratt (staff liaison), Steve Comstock, Claire Ramspeck, Vanita Gupta, Jim Colton

Principle Motions

Motion #1: That the bEQ committee accept the changes to the Godfrey recommendations as shown in Appendix D (Bohanon seconded)

Vote: Motion passed with unanimous voice vote, CNV

Motion #2: That the optional HVAC worksheet option #2 be added to the In Operation workbook (Misuriello seconded)

Vote: Motion passed with unanimous voice vote, CNV

Motion #3b: That the current bEQ free submission offer be extended through January 31, 2016

Vote: Motion passed by unanimous voice vote, CNV

New and Open Action Items

New Action items from May 21-22, 2015 Atlanta Meeting:

- **AI 1:** **Montgomery** and **Brandemuehl** to determine strategy and timing for follow-up meetings with EPA, BOMA, and USGBC after July 1 (including strategy about LEED compliance paths).
- **AI 2:** **Montgomery** to follow-up with **TC 7.6** to request that the PCBEA rewrite include bEQ in the energy benchmarking requirements.
- **AI 3:** **Montgomery** to follow up on the suggestion to reach out to municipalities and universities with sustainability plans
- **AI 4:** **Pratt** to add **Mark Ames** and **Jim Scarborough** to all future copy lists for meetings and information.
- ✓ **AI 5:** **Montgomery**, **Brandemuehl**, and **Pratt** to write up the modified recommendations for Godfrey. (Note: modified recommendations sent to Godfrey on 5/23/2015.)
- ✓ **AI 6:** **Pratt** to find and distribute the notes from previous discussion on building types for the As Designed rating. (Note: information sent to Methodology SubC on 6/4/2015.)
- ✓ **AI 7:** **Pratt** to invite **Nora Wang** to Methodology subcommittee meeting at ASHRAE Annual meeting in Atlanta. (Note: email sent on 6/8/2015.)
- **AI 8:** **Marketing subcommittee** to develop a recognition program for submitters.
- **AI 9:** **Larry Markel** to draft a plan for initiating a prototype in Orlando for expanding ASHRAE products and services in other municipalities.

- **AI 10: Methodology subcommittee** to generate a concept for bEQ LITE and bring back to committee.
- **AI 11: Marketing subcommittee** to create a plan to present to EPA on how to integrate/link bEQ and potentially bEQ LITE with ENERGY STAR Portfolio Manager.
- **AI 12: Methodology subcommittee** to look at mapping ENERGY STAR Portfolio Manager against bEQ scores.

Open Action Items from previous meetings

January 25, 2015 Chicago Winter Meeting:

- ✓ **AI 2: Markel and Patenaude** to draft up a plan on working with the City of Orlando for **David Underwood** to present to ExCom. (Replaced by May 14, AI 9.)
- **AI 3: Michael Brandemuehl** to have **Methodology Subcommittee** evaluate the submission review process for further automation and speed.
- **AI 7: Pratt** to send **Nate Boyd** information on previous bEQ Journal articles.
- **AI 8: Brandemuehl** to work with **Krishnan Gowri** on his request to incorporate bEQ into the rapid capture for energy modeling project.
- **AI 9: Eley** (Standard 189.1 Liaison) to explore the use of bEQ as a compliance tool with outcome based codes with Standard 189.1 as appropriate.

November 16-17, 2014 Atlanta meeting:

- **AI 11: Lilas Pratt** to work with **Steve Comstock** to add “Powered by ASHRAE” to the bEQ headers on the website and workbooks and to determine if the phrase is registered.

August 27 & 29, 2014 Methodology SubC Conference Calls

- **AI 6: Pratt** to modify As Designed procedure instructions, for review by the bEQ Committee, to reflect that fully designed buildings can get a preliminary label that would then be verified after construction is complete. – **Ongoing as part of Workbook updates**

June 29, 2014 Seattle Annual Meeting

- **AI 1: Eley** to lead an effort to write a conference paper for the bEQ In Operation process and methodology. (On hold)

May 21, 2014 Marketing Subcommittee Conference Call

- **AI 6: Nall** to put together a first draft for an ASHRAE HQ building case study with help from **Walters**.

January 19, 2014 New York Winter Meeting

- **AI 4: Pratt** to catalog articles about bEQ on the ftp site for access by the **Committee**.

Meeting Minutes

1. **Call to Order - Meeting convened Thursday, May 21, 2015 at 11:00am EDT**
 - a. ASHRAE Code of Ethics ([Appendix A](#)) – Information Item

- b. Committee Structure & Roster ([Appendix B](#)) – Information Item
- c. Committee Purpose and Scope ([Appendix C](#)) – Information Item
- d. Review of Agenda by committee
 - No changes
- e. Review of Voting rules
 - 8 voting members; Quorum is greater than 50% = 5 voting members.
 - All matters to be decided by a majority of those voting, with fiscal matters requiring a two thirds majority.

2. New Business

- a. January 25, 2015 Chicago Meeting Minutes: Previously approved by Letter Ballot
- b. Posted Meeting Minutes: www.ashrae.org/society-groups/committee/beq-committee

3. Chair's Opening Remarks – Ross Montgomery

- a. Godfrey Recommendations ([Appendix D](#) – Original Recommendations)
- b. Godfrey Presentation Meeting Notes – March 4, 2015 ([Appendix E](#))
- c. Committee Discussion Meeting Notes – April 1, 2015 ([Appendix F](#))
- d. Results of Letter Ballot to approve ([Appendix G](#))

4. ASHRAE Leadership Meetings in Washington DC ([Appendix H](#))

- ASHRAE senior officers meet twice per year with partner organizations in DC to talk about current issues. The meetings are about an hour each.
- This year bEQ was discussed with a number of the partners. The feedback from those partners is that bEQ is well respected and has some recognition; but it doesn't have the market penetration that it needs to have or should have.
- Additional details on the meetings are provided in [Appendix H](#).
- EPA/ Jean Lupinacci Meeting:
 - Jean Lupinacci is acting director (previous director retired) in addition to her existing position. Because she is wearing two hats, she and her department are stretched pretty thin. Her acting position will end July 1 as they will name a new director at that time.
 - There is great concern over the coming sequester. Federal departments have all been given their budget cuts all of which are significant and they are looking at how to reduce costs.
 - Lupinacci was surprised by some of the changes to the bEQ program, pleased by the change adding PEs as qualified raters, but not so pleased about the change to using Standard 100. She felt that the Godfrey points/recommendations were long overdue.
 - Markets Discussion: Small buildings (< 5000 SF) are not a target market for ENERGY STAR which makes that sector a potential market for bEQ.
 - Higher education and the hotel industry are also good targets for bEQ. The hotel industry doesn't like ENERGY STAR as it feels resorts are unfairly rated. ENERGY STAR also has an issue with buildings that are repurposed or upgraded such as upgraded supermarkets.
 - EPA and USGBC have a portal between ENERGY STAR and LEED. They would be willing to create the same kind of partnership with bEQ. Alternate compliance paths are acceptable and some sort of translation table between the two rating systems might work.
 - The committee would need to map the scores -- information/work in the technical support documents for ENERGY STAR might provide the data needed to do that.
- BOMA/ Henry Chamberlain meeting:
 - A quick overview of bEQ as it relates to BOMA 360 was provided toward the end of the meeting. As reported in Chicago, BOMA likes the reporting of ways to improve energy, is

interested in bEQ as a compliance path for the energy piece, and would like to look at imbedding some of bEQ into BOMA 360.

- USGBC / Brendan Owens meeting:
 - The bEQ program was mentioned as an alternate compliance path at the end of USBGC meeting. USGBC is open to this idea and would like a concrete proposal from ASHRAE on how that would work.
 - It was noted that this topic also came up in the AEDG SC meeting earlier in May. As per the notes from that meeting:
 - USGBC has some concern about the proliferation of mechanisms/paths for LEED compliance that may be producing the same outcome, and they would like to see some strategy from ASHRAE around that.
 - Currently LEED has the Standard 90.1 compliance path, the AEDG compliance path, and now there is potentially the bEQ compliance path.
 - ASHRAE may want to take this issue back to ExCom to make sure that ASHRAE is coordinating the different arms all reaching out to the same place
- Follow-up meetings are suggested between these organizations and the bEQ Committee. IOt is up to the committee as to what would be the best timing for those meetings. Although, it may be best to wait to meeting with EPA after July 1.

AI 1: Montgomery and Brandemuehl to determine strategy and timing for follow-up meetings with EPA, BOMA, and USGBC after July 1 (including strategy about LEED compliance paths).

5. Full Committee Open Discussion

11:40am

- a. bEQ Program Goals ([Appendix I](#))
 - At the very beginning, bEQ was part of a three prong approach to approving buildings: *High Performance Buildings*, certifications, and bEQ.
 - The program was in sync (timing-wise) with the Society's morphing from an HVAC&R focused association to the Society taking a whole building approach.
- b. Well Building Standard ([Appendix J](#))
 - This program provides an interesting example of how another program carved out a unique niche and articulated that niche very well.
- c. Source vs. Site Energy ([Appendix K](#))
 - Electricity is not a source of energy – it is just a medium for transporting energy. Moving the rating to site energy would create a huge bias towards electric buildings and could also create some fairly perverse incentives.
 - Site energy undervalues electricity because it ignores that, on average, it takes 3 units of primary energy to generate electricity. Right now, 90% of electricity is generated with coal and gas.
 - That is changing as more renewable sources come online – once the grid gets to 50% or more renewables, bEQ should probably be encouraging the use of electricity.
 - The compromise that has been reached on 90.1 and 189.1 has been to use energy cost rather than site or source energy. However, cost is also biased also based on the region or area where located.
 - Using a two model approach in the asset rating would allow for normalization for energy sources and cost issues which neutralize the biases.
 - On the other hand, thermal storage doesn't get its just due in source energy and the CBECS data is in site energy.

- The committee agrees that there are too many other issues to deal with in the near term and that the site-source discussion should not be a driver for other decisions.
- It was also noted that both sets of numbers are reported in the rating documentation.
- It was suggested that the committee should do a deep dive for city of Orlando and investigate changes to the Dashboard based on their feedback.

d. Fundamental Mission/vision/objectives ([Appendix L](#))

- Changes to Standard 90.1 to create the performance cost index (PCI) and a stable baseline with appendix G are up for approval at the Annual meeting in Atlanta. The stable baseline will also be used in Std 189.1 which will require a lower PCI.
- Utility incentive programs can build on this, and LEED points could be based on the same scale. It would be good if the As Designed rating could be tied into this same modeling procedure – it would still need to map this back to the In Operation rating with a translator from the PCI to bEQ.
- Software developers have been reluctant to invest in changes because the baseline kept changing, but now that the baseline will be stable, they should be more willing to make those investments/changes.
- It makes no sense to get rid of the rating aspects of bEQ.
- From a global perspective, the rating may be considered very valuable in other countries.
- The program assists in energy management, but does not do energy management. The program does do benchmarking.
- The program's process tries to improve building performance, by providing information and recommendations, and through the rating comparison.
- The trick is not to redefine the ground zero mission, but rather to define the best strategy for how bEQ works as compared to and partnered with the other players. It makes sense to try to work with as many other programs as possible.
- The main frustration is that bEQ is not being used. There is clearly a market for rating systems, and the bEQ Committee has made good decisions technically. Unfortunately, bEQ doesn't seem to be something that the owner wants to put on his wall.
- People don't know what bEQ is and so they don't know that they want it. It is not in terms that they can understand. Putting it on a cost basis would make it easier to understand.
- NEMA tried to use of bEQ in their tax incentive proposal. The pushback from Congress was that they didn't understand it and thought other rating systems would be simpler to use.
- High performance buildings don't really need bEQ to trumpet their success. They have all the other labels right now and until bEQ is a known commodity, they have no need to add it to the labels on their building.
- ENERGY STAR participants are a self selected group and huge percentage don't care about the rating, but rather are just interested in the benchmarking.
- The buildings that the University of Nebraska picked for the bEQ class were not high performance buildings, but rather buildings that they wanted to know more about. The chancellor had issued an edict/target to lower energy consumption, and they needed to have some way of measuring that progress.
- bEQ can improve the energy performance of lower performing buildings – but are these buildings are interested in spending money to do this?
- Getting bEQ into LEED for points would give it credibility. There is a new requirement in EBOM to compare to other buildings that bEQ would fulfill.
- It is worth noting that the As Designed- In Operation marriage finally builds a bridge between the design and operation sides of a building. Part of the frustration with

marketing conversations is the desire to find a niche that would essentially narrow bEQ's approach. One of the appeals of bEQ is the breadth of its applicability. What other program is useful to both that a poor performing and a high performance building?

- With a program that is designed to do all these things, it makes sense to keep the full breadth and focus on partnering with other organizations.
 - While bEQ will never match Portfolio Manager's numbers, bEQ provides something that appeals to both the high and low end of buildings. Rather than try to figure out a specific niche, perhaps explore how to make bEQ appeal to the people interested in rating programs.
 - The committee agrees that:
 - bEQ is a rating system as well as a management tool and benchmarking and should remain as all those pieces.
 - Marketing of bEQ should not be limited to a narrow niche, but rather retain the wide breadth of what the program offers.
 - Both the As Designed and In Operation ratings should remain and should be better coordinated and aligned with each other.
 - Further negotiation with EPA on integration with ENERGY STAR should be pursued
 - There is an opportunity to improve the site-source ratios by making them different by country or region.
- e. IEQ & Water aspects of bEQ
- Should bEQ put more emphasis on IEQ or water? Should these areas be included into the rating determination?
 - Linking bEQ to other ASHRAE resources (not necessarily mandatory) such as Standards 62 and 55 could be a selling point for some people. More information could be included to help a building determine if they are complying with these requirements.
 - However, bEQ has always been an energy rating and points were never intended for areas outside of energy performance. The original intent was to keep submitters from gaming the system (e.g., turning off ventilation) to get a better bEQ score.
 - Buildings need to meet a minimal threshold for comfort, lighting, etc, but these areas should be included in the rating.
 - It may be worth noting that the option parts of the In Operation Workbook are not being used by very many submitters.
- f. Marketing Update – Vanita Gupta (ASHRAE Marketing Director)
- Vanita Gupta started with ASHRAE in January 2015 as Director of Marketing. Her background is for-profit corporate, most recently in the tech world.
 - One big question is whether there is a need and market for bEQ?
 - If there is a need, how are the parameters of success defined? The number of submissions? The money generated for ASHRAE or members? The number of A ratings? Having a dedicated website? The number of website hits? Becoming a household name?
 - If there is not a need, where does the program go from here? What are the strengths and weaknesses of the program?
 - There are advantages to leveraging ASHRAE in promoting bEQ.
 - The bEQ name may still be confusing to some parts of the audience.
 - Ideally, a brand name would be something easy that flows and that defines the product ... like Bgreen.
 - (It was noted that Bgreen looks and sounds a lot like BREEAM, a design and assessment method for sustainable buildings.)

- g. History and Perspectives – Steve Comstock (ASHRAE Publications Director)
- What is the difference between marketing, advertising, and public relations (PR)? Advertising is more PR, branding, and making the product a household name. Advertising you pay for, PR is free, and both are implemented via a marketing plan.
 - Advertising can be very expensive. Space in the ASHRAE Journal is \$8000 per page in ASHRAE Journal and that is on the low end of the cost scale. In addition, ads need to be purchased in multiple month packages.
 - If bEQ can partner with other groups and give them a reason to get engaged then that increases the outreach as the other organizations are now invested.
 - Buildings don't want to pay to get a bad rating. The real value of bEQ is the fact that someone made an investment in the process to improve their building and make it sustainable, and they can market that to the public.
 - One of ASHRAE's bestselling books is the Procedures for Commercial Building Energy Audits (PCBEA). The committee may wish to tie bEQ to the audit book, so that they get a good process to improve their building.
 - The University of Nebraska went looking for bad buildings so they could demonstrate the need for money to improve the building. As a result of the bEQ rating process, money has now been approved for improvements to the first building that was rated.
 - Mandatory disclosure would help bEQ take off. The reason why 90.1 took off is that it is mandatory. PCBEA took off for the same reason because the ASHRAE level audits are now referenced in code.
 - bEQ did not originally include suggestions for energy efficiency measures or discussions about measuring before and after improvements? Form 4 (Energy Efficiency Suggestions) was added as a result of the pilot and the work of several of the provisional assessors.
 - The people who get ENERGY STAR ratings are not necessarily the same people who would get bEQ ratings. Some municipalities might require an audit of buildings with ES scores below a certain level.
 - Potential markets include: municipalities and universities that have sustainability plans. Major universities are increasingly including a sustainability officer.

AI 2: Montgomery to follow-up with TC 7.6 to request that the PCBEA rewrite include bEQ in the energy benchmarking requirements.

AI 3: Montgomery to follow up on the suggestion to reach out to municipalities and universities with sustainability plans.

- h. Should bEQ keep current letter scores, bars, colors, etc?
- Lower numbers are not always better, as people generally want high scores and linking the score to grades gives a negative perception.
 - The value is in the process and the documentation which gives the building information to work with.
 - There are two parts to this issue: the letter grades and the defined bins in the rating. bEQ has six bins (A+, A, A-, B, C, D, F); LEED has five bins (not rated, certified, silver, gold, platinum); ENERGY STAR has two bins (not rated, ENERGY STAR).
 - If the objective is to help people improve energy performance, then more differentiation at the low end of the bEQ score may be appropriate.
 - The current scaling may be too top heavy, so reconsidering the whole scoring/scale system may be appropriate. Moving to a 1-100 scoring system may be an option.

- However, having a scale where 0 is zero energy and 100 is an average building does make sense on many levels. That scale could be retained and mapped to a percentile scale, letter grades, or anything else.
- The HERS index is set up the same way where 0 is a zero energy home and 100 is the HERS reference building.
- The bins were originally set up to all be the same size (0-25, 25-50, 50-75, etc); however, they were changed after the pilot. The change put the median building (100 score) in the middle of the “C” bin (it was previously at the bottom of that bin) and put the ENERGY STAR threshold (75 percentile) in the middle of the “B” bin. The bin descriptions were also changed at that time to make them less “judgmental” in tone.

| Original Scale Designations | | Current Scale Designations | |
|-----------------------------|---------|----------------------------|---------|
| A+ Net Zero Energy | 0 | A+ Zero Net Energy | 0 |
| A High Performance | 1-25 | A High Performance | 1-25 |
| A- Very Good | 26-50 | A- Very Good | 26-55 |
| B Good | 51-75 | B Efficient | 56-85 |
| C Fair | 76-100 | C Average | 86-115 |
| D Poor | 101-125 | D Inefficient | 116-145 |
| F Unsatisfactory | > 125 | F Unsatisfactory | > 145 |

- The letter grades were also changed fairly early on to add the A- to bring more distinction to the top of the scale (and to move the B further down and ‘capture” more buildings in a “good” rating). When the A- was added, the E was dropped (rather than the F) because E could also mean “Excellent.”
 - One suggestion is to keep the scores and the existing bins but to only give letter grades for ratings of “B” and above. Everyone else would get a “Rated by ASHRAE” plaque – and no one would receive an “F” rating.
 - The next step would be to relate the rating to ENERGY STAR, Standard 90.1, etc. Determining these relationships for the As Designed rating would be straight forward, and the In Operation would also be doable.
 - Another suggestion is to create a ribbon for the ASHRAE meeting badges for people that have rated a building with bEQ, or perhaps a lapel pin.
 - The committee agrees that some changes may be appropriate. The specific changes are to be determined but could included the letter grades, the scale, the designations, etc.
- i. Should the bEQ name be changed?
- The name does not currently convey what the product is. And, the longer the current name is out there, the harder it will be to get traction with a new name.
 - It would seem to make sense to wait until any changes to the program are finalized before changing the name. If no changes are made, there would be no reason to change the name.
 - If the name is changed, it would be helpful to do it in a way that doesn’t throw away what little name recognition has been gained so far.
 - One suggestion is to align “Building Energy Quotient” (bEQ) with the calculated score, and morph the full program to another name that is more indicative of the entire program and process.
 - It would also be good to keep ASHRAE in the name. However, if co-branding or partnering with other programs, adding ASHRAE to the name could be problematic.

- The committee may also want to reconsider the “In Operation” and “As Designed” names. These designations have created confusion from the outset.
 - The committee agrees that there is no need to change the name immediately, but instead a name change should be considered in conjunction with making other changes to the program. The concept needs to be defined and nailed down first and any change to the name would follow from the strategy.
 - A new name would likely only take about four weeks, but a full branding would take longer. There would be an additional cost to Godfrey to follow the process for a name change.
- j. bEQ Powered by ASHRAE Logo
- How this logo and tag line are used depends on whether or not the name is changed.
 - If the name is changed, but EQ is kept for the score, the original logo could still be used for that score.
 - “Powered by ASHRAE” is a good tagline and could be added to any name change.
- k. Use of the word optimization in the messaging recommendation? ([Appendix D](#))
- The committee is opposed to use of the word “optimization” and feels that “assessment” would be a good substitute.
 - There is also some question as to whether “most comprehensive” is an accurate statement.
 - On the other hand, other programs do not have both asset and operational ratings, tools for improving buildings, and recognition for high performing buildings.
 - The committee has talked about bEQ being a ranking and rating program but it is really an assessment program. An assessment program tends to be a little more passive – a management program would be another way to describe it.
 - bEQ doesn’t manage energy – it is really are more of an assessment program as in providing an evaluation.
 - The messaging could call it a rating and recognition program, but that might hit too close to ENERGY STAR and LEED.
 - Assessment does a good job describing what bEQ does.
 - Messaging Position: *ASHRAE’s bEQ is the most comprehensive building energy assessment program providing actionable recommendations for today’s commercial buildings.*
 - Shorter alternative: *ASHRAE’s bEQ is the most comprehensive energy assessment program for today’s buildings.*
 - The As Designed rating doesn’t provide actionable recommendations. But the rating program as whole does.
 - There really are two uses for the AD rating: new construction and existing buildings. The As Designed rating could be marketed as a pre-construction tool, for use on existing buildings to improve energy, or as better way to disclose energy for real estate transactions?
 - It would not seem to be worthwhile to market the AD rating to the modeling community. However, if the As Designed rating could be tied to Standard 90.1 and LEED (as per the research project), there could be a possible market to that community.
- l. Should bEQ continue to report to BOD or go to a Council?
- At the time that this committee was formed, arguments were made to have it report to one of the councils.

- The rationale for having it report to the BOD was that the program would affect and be influenced by all three councils. Therefore, the committee was set up to have voting representation for each of the councils in addition to the at-large voting members.
 - The BOD has directed the finance committee to break out the bEQ budget to be reported independently of the ASHRAE budget. It is unlikely that the BOD would be in favor of changing the bEQ reporting structure at this time.
- m. What ASHRAE resources should be dedicated to bEQ in the coming year?
- The bEQ Committee should have a closer relationship to the TCs including 7.6, 4.7, 2.8 – they are the technical resources that form the basis of the methodologies.
 - Relationships with SSPCs for 90.1, 189.1, 214, 211, 100 will also be beneficial. More specifically, the ECB subcommittee on 90.1.
- n. Does the committee size need to be increased?
- An Operations/Outreach subcommittee was discussed in Chicago.
 - From an outreach perspective, representatives from Orlando and Salt Lake City would be helpful. However, this could be a duplication of GGAC work. A GGAC liaison may be warranted.
 - From an operations perspective, the operations subcommittee would oversee/manage the flow of submittals.
 - The bEQ committee for 2015-16 has two additional consultants. Mark Ames and Jim Scarborough should be invited to all future meetings.

AI 4: Pratt to add Ames and Scarborough to all future copy lists for meetings and information.

6. Review of Godfrey Recommendations ([Appendix D](#) – Modified Recommendations)
- A question was raised as to what the business model needs to be – will enough labels be generated to pay for advertising and the investment into an on-line portal?
 - Another approach is that this just something that is good for ASHRAE and needs to be done as it the program could have a beneficial effect on a significant number of members.
 - About 12,000 (out of 55,000) ASHRAE members are consulting engineers and 8000 are contractors (some design/build), so one could estimate that 15,000 to 18,000 ASHRAE members are engaged in assessment and/or auditing activity.
 - Another way it could be good for ASHRAE is that it makes ASHRAE more important, elevates other offerings, and brings in new members.
 - These approaches are also tied into what sort of partnerships are entered into around bEQ. The value of bringing in other groups is gaining market exposure without spending a lot of money.
 - EPA doesn't want bEQ to have any competition with their program. They may be open to it as an alternate path, but bEQ needs to recognize their program. If bEQ submissions are also entered into their database, that helps everyone and gets more buildings into their database.
 - ASHRAE could also license other organizations to use the bEQ program.
 - Most mechanical contractors have commercial service departments and these generate long term relationships.

7. Recess – Meeting recessed Thursday, May 21, 2015 at 5:30pm EDT

8. Reconvene – Meeting reconvened on Friday, May 22, 2015 at 8:00am EDT

9. Committee agreement on Modified Recommendations and Phase 2 work
- See [Appendix D](#) annotations (Modified Recommendations)

Motion #1: Brandemuehl moved that the bEQ committee accept the changes to the Godfrey recommendations as shown in Appendix D (Bohanon seconded).

Discussion:

- The committee was reminded about the caution from Godfrey at the November meeting that bEQ should not try to be all things to all people.
- It was suggested that some additional clarity on interaction with ENERGY STAR and EPA would be helpful moving forward.
- The message may be different for different market, so what specific message goes to what market needs to be determined.
- Tim Wentz reported that no issues were anticipated from the BOD on these changes and suggestions by the committee.

Vote: Motion passed with unanimous voice vote, CNV

- A new motion and vote will be needed in order for the committee to authorize Godfrey to move forward with phase 2.
- One concern noted is that some of Godfrey's key recommendations have been shot down, so they may need some additional clarity.
- Another concern noted was whether it is possible to move forward with phase 2 without knowing bEQ's relationship with EPA and DOE?
- There are good indications on the direction that bEQ should go with EPA and BOMA. Modifications were made to the recommendation based on those indications. Once details are worked out with EPA on portals and compliance paths, those can be added later. But these details will not affect the underlying messaging in the recommendations.
- Godfrey will be developing three different concept paths and perhaps those could explore three different levels of partnership with EPA and others.
- The committee should also share some of the uncertainties with Godfrey.
- Employing Godfrey to do the leg work on creating a name change would require a change order and additional monies from the original contract.

AI 5: Montgomery, Brandemuehl, and Pratt to write up the modified recommendations for Godfrey. (Note: modified recommendations sent to Godfrey on 5/23/2015.)

10. Methodology Subcommittee Report (Brandemuehl)

a. As Designed Rating Procedures

- An interim plan has been agreed to by the subcommittee and this is to move forward with what was previously agreed to by the committee so as to allow posting of an updated workbook immediately following the Annual Meeting in Atlanta.
- The subcommittee will then continue to review and tweak the proposed plan for calculating the median EUI as put forth by Charles Eley.
- One task still to be needed is the collapsing of the building types into a smaller number of categories (as usage distinctions are no longer needed). This issue had been covered at a previous meeting. The subcommittee needs to review that discussion and make the needed adjustments.

AI 6: Pratt to find and distribute the notes from previous discussion on building types for the As Designed rating. (Note: information sent to Methodology SubC on 6/4/2015.)

b. HVAC Worksheet Options

- The subcommittee discussed the two options and agreed that option #2 was the appropriate choice to include in the In Operation Workbook.

Motion #2: Brandemuehl moved that the optional HVAC worksheet option #2 be added to the In Operation workbook (Misuriello seconded).

Discussion: Option #2 provides more flexibility and ease of use. The worksheet should be left unlocked to allow for adjustments by the user.

Vote: Motion passed with unanimous voice vote, CNV

a. International fuel mix BTU Value

- The subcommittee discussed this issue and decided that to leave the current default conversion values in the cells, but to unlock the cells to allow submitters to make changes.
- In addition, the Fuel oil option will be moved to the final named fuel in the list, the coke/coal option will be eliminated, and the bottom three rows will all be come “other fuel”.
- The units on these will be listed as kbtu, but the cells will remain unlocked to allow for changes. The conversion factor will remain blank and the site-source factor will be made equal to 1.01.

b. Research Project Status

- The RTAR and Work Statement were submitted to RAC by May 15 deadline for review. They are currently under consideration by RAC. The project included co-sponsorship with TC 7.6.

AI 7: Pratt to invite Nora Wang to Methodology subcommittee meeting at ASHRAE Annual meeting in Atlanta. (Note: email sent on 6/8/2015.)

11. Marketing Subcommittee Report (Markel)

a. Free Submission Status / Extension

- The methodology subcommittee suggests not making any changes in the submission cost until some traction is realized from the Godfrey efforts.
- They would like to extend the current free submission offer at least through the end of this calendar year (December 2015).

Motion #3: Markel moved that the current bEQ free submission offer be extended through December 31, 2015 (seconded Misuriello).

Motion #3a: Brandemuehl moved that motion #3 be amended to change the extension date to January 31, 2016. (Misuriello seconded)

Discussion:

- The extended date allows this to be a talking point at the ASHRAE Winter meeting in Orlando.

Vote: Motion passed by unanimous voice vote, CNV

Motion #3b: That the current bEQ free submission offer be extended through January 31, 2016

Vote: Motion passed by unanimous voice vote, CNV

Motion #4: Markel moved that a certificate be issued to individual submitters that recognizes their bEQ submittal

Vote: No vote taken as there was no second for the motion

AI 8: Marketing subcommittee to develop a recognition program for submitters.

- b. Expansion of ASHRAE products/services
 - The committee needs to look into how to expand ASHRAE’s products and services in Orlando – this could be a prototype to create a model for other municipalities.
 - The plan should include points about the intended audience, performance tools, actionable recommendations for energy efficiency, user/building owner drivers, etc.
 - Pertinent tools and publications include the PCBEA, bEQ program, standards, special publications, ALI courses, and references that show value to the owner. Success stories, testimonials, and/or case studies would also be helpful.

AI 9: Larry Markel to draft a plan for initiating a prototype in Orlando for expanding ASHRAE products and services in other municipalities.

- c. bEQ Lite & Energy Star
 - One possible way to draw in building owners and non-technical people would be to create a “bEQ-Lite” product to complement the existing program.
 - This could be thought of as a screening tool. It wouldn’t provide a rating, but would generate some sort of feedback and a number/score. This could be used to generate more business, perhaps by providing a list of BEAPs when they get their number/score. An enhanced Dashboard could link to additional tools and resources.
 - A PE would not be needed to get the bEQ Lite score – the building could enter their own data to get a score, a dashboard, and an estimate of what they might be able to save.
 - This would need to be tied to an on-line data entry process.
 - The feedback on bEQ Lite could include site energy, source energy, and cost.
 - The bEQ Lite program could use Portfolio Manager as a portal into ENERGY STAR and bEQ. Perhaps there could be a button the user could click on to go further. bEQ could also link back to Portfolio Manager with a button to click on.
 - The pitch to EPA is that there would be a circular link from bEQ LITE to bEQ and Portfolio Manager/ENERGY STAR that would allow for data inputs from ENERGY STAR/Portfolio Manager to bEQ/bEQ LITE and possibly vice-versa.
 - bEQ would be more attractive as an alternate compliance path for Portfolio Manager if the scores could be mapped to each other.

AI 10: Methodology subcommittee to generate a concept for bEQ LITE and bring back to committee.

AI 11: Marketing subcommittee to create a plan to present to EPA on how to integrate/link bEQ and potentially bEQ LITE with ENERGY STAR Portfolio Manager.

AI 12: Methodology subcommittee to look at mapping ENERGY STAR Portfolio Manager against bEQ scores.

12. Other Business

- a. University Course Update (Wentz)

- CNST-498/898, Building benchmarking and disclosure was offered in Construction Management, but also posted in Engineering and Architecture departments. It was available for both undergrad and grad students
 - The course was more of an independent study course and was very successful. There were eight students, all of whom passed. The university was happy with the results.
 - The rating for the first building has been submitted and awarded. Workbooks for three more buildings are in the final process. They have some issues that need to be addressed with the facility manager.
 - The class does require an instructor, but all the lectures are on line. Various experts (including Don Herman) contributed to the on-line material.
 - The textbook was the Procedures for Commercial Building Energy Audits (PCBEA) was used as the textbook; although the form/worksheets came from the bEQ Workbook.
 - Quizzes, assignments, learning objectives, and syllabus are all completed but need to be cleaned up a little bit for future use. A review by the committee would be helpful.
 - The first four weeks covered space function analysis, site visits, interviews, etc.
 - The next task was for the full class and instructors to do the bEQ In Operation assessment and Level 1 audit for a single building.
 - The students then divided into teams, each of which did an individual building.
 - The goal is put the class into a 3-credit-hour senior or graduate level course that is available for free to universities worldwide. Need to determine how to best package it to achieve that goal.
 - The class is currently in I-P only and probably needs to be converted to dual units.
 - There is value in having someone register for and receive the class from the ASHRAE website. Links to additional ASHRAE resources could also be included.
 - The registration process may want to include looking at the instructor and his background.
 - While the templates could be ASHRAE branded, that would not be necessary.
 - (Note: Please also see separate file on course feedback: *CNST-498-898_Feedback.pdf*.)
- b. Review of **Action Items** ([Appendix M](#))
- See Appendix M.
- c. bEQ Budget changes for Finance Committee consideration
- No changes required.

13. Upcoming Meetings/Presentations

- a. Atlanta Annual Meeting, June 2015
- Methodology Subcommittee – Saturday, 6/27; 12:30pm-1:30pm
 - Marketing Subcommittee – Saturday, 6/27; 1:30pm-2:30pm
 - Full Committee – Sunday, 6/28; 8:30am-11:30am
- b. Workshop 5 – Monday, June 29, 4:00 PM-5:00 PM – Grand Ballroom C
Energy Rating and Managing Your Commercial Building Using ASHRAE Building Energy Quotient (bEQ)
Chair: Ross Montgomery, P.E., Fellow ASHRAE, Quality Systems and Technology Inc., Parrish, FL
1. Using ASHRAE bEQ as an Energy Management and Benchmarking Tool, Along with retro commissioning and Energy Audits to Achieve Maximum Potentials
Terry Townsend, P.E., Fellow ASHRAE, Townsend Engineering Inc, Chattanooga, TN

2. How to Perform and Obtain a bEQ As-Designed and In-Operation Rating:
Requirements, Technical Aspects and Resources
Michael Brandemuehl, Ph.D., Member, University of Colorado, Boulder, CO

14. Adjourn – Meeting Adjourned at 1:00pm EDT

Appendix A: ASHRAE Code of Ethics

1.140.001.1 As members of ASHRAE or participants in ASHRAE committees, we pledge to act with honesty, fairness, courtesy, competence, integrity and respect for others in our conduct.

A. Efforts of the Society, its members, and its bodies shall be directed at all times to enhancing the public health, safety and welfare.

B. Members and organized bodies of the Society shall be good stewards of the world's resources including energy, natural, human and financial resources.

C. Our products and services shall be offered only in areas where our competence and expertise can satisfy the public need.

D. We shall act with care and competence in all activities, using and developing up-to-date knowledge and skills.

E. We shall avoid real or perceived conflicts of interest whenever possible, and disclose them to affected parties when they do exist.

F. The confidentiality of business affairs, proprietary information, intellectual property, procedures, and restricted Society discussions and materials shall be respected.

G. Each member is expected and encouraged to be committed to the code of ethics of his or her own professional or trade association in their nation and area of work.

H. Activities crossing national and cultural boundaries shall respect the ethical codes of the seat of the principal activity.

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Appendix B: bEQ Committee Structure – FY 2014-2015

bEQ Committee Members (voting): Ross Montgomery (Chair), Michael Brandemuehl (Vice-chair), Larry Markel (Tech Council Representative), Ray Patenaude (Members Council Representative), Filza Walters (Pub-Ed Council Representative), Hoy Bohanon (Member-at-Large), Harry Misuriello (Member-at-Large), Dan Nall (Member-at-Large)

bEQ Consultants/Others (non-voting): Hywel Davies, Charles Eley, Tim Wentz (Coordinating Officer)

Marketing Subcommittee: Larry Markel (chair), Ray Patenaude, Filza Walters, Hywel Davies, Tim Wentz

Methodology subcommittee: Michael Brandemuehl (chair), Hoy Bohanon, Harry Misuriello, Dan Nall, Charles Eley

Committee Liaisons: Standard 100 – Patenaude; Standard 90.1 – Misuriello; Standard 189.1 – Eley; Standard 62.1 – Bohanon; Standard 241P – Montgomery; Technical Committees (TC 4.7, TC 7.6) – Brandemuehl

Appendix C: 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 through ExCom 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.

This committee shall review its Rules of the Board. Each change recommended by this committee shall be submitted to the Board for vote.

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Appendix D: Godfrey Recommendations

RECOMMENDATIONS AS PRESENTED BY GODFREY

Program Recommendations:

1. ASHRAE bEQ should be an energy management tool – not a benchmarking or rating tool
2. Let ENERGY STAR be the rating tool – Don't compete with ENERGY STAR, integrate with ENERGY STAR
3. ASHRAE bEQ + ENERGY STAR's Portfolio Manager = A complete solution
4. bEQ provides what building owners really want –*actionable recommendations*
5. The market wants both the AD and IO ratings
6. An online portal is almost an expectation today

Marketing Recommendations:

1. Maintain closer brand alignment of the program to ASHRAE
2. Consider an updated name that more clearly defines your offering
 - Building Energy Quotient is hard to remember and sounds more appropriate for a rating system
 - ASHRAE bEQ is hard to remember and understand the offering or the associated benefit
3. Be consistent with the use of the program name
4. Let ENERGY STAR market the combined solution to the end users (local governments, utilities, building owners)
5. Provide ENERGY STAR with the needed materials to effectively promote the program
6. Promote ability to conduct bEQ assessment as a benefit of membership to PE ASHRAE members – use as a message to recruit new members (specifically PEs /Consulting Engineers)
 - Promote program improvements (like new partnership with ENERGY STAR) and attract additional certified providers – focus on the provider and influencer audiences

Messaging Recommendation:

1. Messaging Position: ASHRAE's bEQ is the most comprehensive building energy optimization program available for today's commercial buildings

RECOMMENDATIONS AS MODIFIED BY bEQ COMMITTEE

Program Recommendations:

1. ASHRAE bEQ should be an energy management tool – not a benchmarking or rating tool
 - No, committee feels it should be everything.
2. Let ENERGY STAR be the rating tool – Don't compete with ENERGY STAR, integrate with ENERGY STAR
 - ES is and can be a rating tool, just not THE rating tool.
 - Certainly want to integrate with ES and to relate the two scores together.
3. ASHRAE bEQ + ENERGY STAR's Portfolio Manager = A complete solution
 - Not THE complete solution, but certainly A solution
4. bEQ provides what building owners really want –*actionable recommendations*
 - Fully agree.
5. The market wants both the AD and IO ratings
 - Fully agree
6. An online portal is almost an expectation today
 - Fully agree

Marketing Recommendations:

1. Maintain closer brand alignment of the program to ASHRAE
– Fully agree
2. Consider an updated name that more clearly defines your offering
 - a. Building Energy Quotient is hard to remember and sounds more appropriate for a rating system
 - b. ASHRAE bEQ is hard to remember and understand the offering or the associated benefit
– Fully agree
3. Be consistent with the use of the program name
– Fully agree
4. Let ENERGY STAR market the combined solution to the end users (local governments, utilities, building owners)
– No, could encourage that, but probably not hand it off to them.
5. Provide ENERGY STAR with the needed materials to effectively promote the program
– Partner with ENERGY STAR to market the program, not really handing anything off to them
6. Promote ability to conduct bEQ assessment as a benefit of membership to PE ASHRAE members – use as a message to recruit new members (specifically PEs /Consulting Engineers)
– Fully agree
7. Promote program improvements (like new partnership with ENERGY STAR) and attract additional certified providers – focus on the provider and influencer audiences
– Fully agree

Messaging Recommendation:

1. Messaging Position: ASHRAE's bEQ is the most comprehensive building energy assessment optimization program providing actionable recommendations available for today's commercial buildings
2. ASHRAE's bEQ is the most comprehensive energy assessment program for today's buildings.

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Appendix E: Godfrey Presentation Meeting Notes

Godfrey presentation notes: Wed Mar 4, 2015

Meeting Convened at 2:00pm EST

Participants: Ross Montgomery, Filza Walters, Hoy Bohanon, Larry Markel, Michael Brandemuehl, Harry Misuriello, Charles Eley, Hywel Davies, Tim Wentz, David Underwood, and VPs

Godfrey: Donna Harris, Chris Templeton

Staff: Lilas Pratt, Steve Comstock, Mark Ames, Claire Ramspeck, Vanita Gupta, Jim Colton, Jeff Littleton, Mary Townsend, Claire Neme

Findings

Findings come from you and your audience.

Marketing research uses their expertise

Normally wouldn't present findings halfway through, but worked out really well.

Harry Misuriello – looking at bEQ as an alternate compliance path for local ordinances

Charles Eley – ENERGY STAR only has operational rating and one bullet says market want both

Larry Markel – Like what I'm hearing now, already working on becoming a compliance path for rating buildings, have buildings that have great ratings, but stink, way to integrate would make sense if possible

Michael Brandemuehl – question on the As Designed, all of the feedback is on existing. Was there any feedback for new buildings and where bEQ would fit into that?

Mark Ames – any feedback on DOE's Commercial Energy Asset Score? A little bit of conversation on that, but most people felt that ASHRAE's audit provided more credibility to make recommendations

Larry Markel – sounds like there is still an opportunity to use our As Designed rating for planned buildings that could predict ENERGY STAR ratings

Lilas Pratt – Note that most partnerships with ENERGY STAR are more of a technical partnership than a marketing partnership.

Larry Markel – not doing performance optimization, doing enhancement only.

Larry Markel – need to be sure to include the "Powered by ASHRAE" tagline with bEQ

Next Steps

This concludes insight and strategy phases.

Now need ASHRAE to review strategy and recommendations and to agree to changes as recommended.

Then need green light to move forward. Next steps would be to develop concept and plan.

These next steps would provide samples of websites, ads, copy, etc.

Godfrey can provide us with an Excel spreadsheet with exactly who they spoke to.

Spoke with Kinga Porsche at GSA.

Hoped to speak with someone at MASS DOER, but weather intervened.

Spoke with two folks in City of Orlando.

Committee Discussion after the Presentation

Steve Comstock – Do think observations to examine the program and how it resonates in the market is really key. Messaging will all follow from that.

Ross Montgomery – Going to create actionable items and come back to the full committee. Whole lot to absorb, committee needs time to review and absorb the information.

Larry Markel – Interesting that comments on integrating with ENERGY STAR are not that different from integrating with BOMA.

Steve Comstock – there is a whole suite of products that work together that improve performance (HPB, bEQ, etc). How make this easier. Easier to fill out, easier online, etc.

Charles Eley – Trying to process this and figure out how the program will change in response. Turning bEQ into an Energy Management program is a radical change from where we are now. It calls up standards for building assessments and such that we really don't deal with now. ENERGY STAR has not asset rating, but market wants a coordinated rating. Implications of this are pretty radical.

Larry Markel – would not be in favor of dropping the rating. The consistency between the IO and AD is one of the strengths. We think the process is the strength, not necessarily the rating.

Lilas Pratt – note that Energy Star only rates a limited number of buildings and does not rate outside North America.

Mark Ames – DOE is planning to fund and promote the Commercial Building Energy Score.

Hoy Bohanon – There are 30 portals on the Energy Star website to get information on other things. So, having ENERGY STAR link to ASHRAE for more information is not a big thing. But what we link to is the question. Here are ways to rate campuses, ways to rate buildings that can't get an ENERGY STAR rating, etc. A portal would provide a pass through to bEQ rather than try to compete with ENERGY STAR. This would allow people to view bEQ as a resource.

Michael Brandemuehl – If really embrace these observations and recommendations, everything hinges on the relationship with the US federal agencies. Don't want to rely on something that will change in another 2 years or with another administration. Seems like the governmental relations activities will have to step it up a notch to achieve what is envisioned by Godfrey. May need to examine the notion of rethinking the AD rating as an existing building rating rather than geared towards new buildings.

Larry Markel – Don't think should abandon the planned phase or new buildings for the AD rating. Need to offer a full suite of products. Most of sales are probably going to come in the US.

Wrap up

Lot's of people on the call. If anyone on the call has thoughts, please send to Ross, Michael, Larry, and Lilas.

Material will be sent out to the people on the call – note that the material is confidential and should not be shared outside of ASHRAE.

Committee will need to vote on the proposal.

Meeting adjourned at 3:25pm.

Appendix F: Committee Discussion Meeting Notes

bEQ Committee

Wednesday, April 1, 2:00pm-3:30pm

Meeting Notes

Participants: Ross Montgomery, Michael Brandemuehl, Larry Markel, Dan Nall, Filza Walters, Hywel Davies, Charles Eley, Tim Wentz, Lilas Pratt

Unavailable: Hoy Bohanon, Ray Patenaude, Harry Misuriello

Guests: Steve Comstock, Claire Ramspeck, Vanita Gupta, Jodi Scott, Jim Colton

New Action Items from April 1, 2015 Conference Call

- **AI 1:** Pratt to send bEQ- ENERGY STAR graphic in an editable format to Wentz.

MEETING NOTES:

1. Call to Order – **Meeting convened at 2:01pm EDT**
 - ASHRAE Code of Ethics
(<https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>)
 - Introductions (Montgomery)
2. Opening Remarks & Recap of Activity/Discussion to date
 - Initial LB offering (LB 2015-1)
 - Approved motion to amend (LB 2015-1A)
 - Amended LB with Conference Call (LB 2015-1B)
3. Committee discussion, pros, cons, questions, comments ([Attachment A](#))
 - a. Item #2A: Acceptance of Godfrey Report
 - LM: Godfrey did their job and provided the committee with a lot to think about and discuss.
 - b. Item #2B: Approval to move to Phase 2 (Concept)
 - MB: Recap of the concept stage of the project:
PHASE 2 - Concept
Utilizing the insight and strategy outlined in the first phase, we will develop three (3) concepts that effectively express the overall strategy/position in an engaging way to the audience. Each concept will demonstrate a distinct approach for creatively communicating the message to the audience. Concepts include a rationale that explains the overall idea, inspiration boards and a detailed sketch that visually represents the idea. As we move into execution, the selected concept will serve as the unifying concept across all of the tactics.
**Executions of the concepts are not included in this proposal.*
 - LM: Before having Godfrey provide concepts for the recommendation, the committee has to decide whether or not to accept the recommendations.
 - MB: Without a specific set of recommendations to go forward with, the concept work would have no real value.
 - c. Items #3: Program Recommendations ([Attachment A](#))
 - LM: Based on comments from the committee, bEQ is not an energy management tool; however, it has some aspects that are helpful to managing a building's energy use. And while the process of doing an energy audit adds value, the committee doesn't think that the rating program should be abandoned.

- MB: One of the key assumptions of these recommendations is that ASHRAE can work with ENERGY STAR. Is there any new information about partnering with them?
- TW: ASHRAE leadership has meeting in Washington DC scheduled for April 27-28. A meeting with EPA on this topic has been requested for addition to the agenda. Confirmation from EPA on that meeting is still pending.
- TW: A bEQ-ENERGY STAR collaboration has been discussed at previous meetings with EPA. There was no indication from these meetings that ENERGY STAR saw bEQ as a competitor. While there had previously been indications that bEQ was considered a competitor, at these meetings, bEQ was mentioned as the next logical step after ENERGY STAR. EPA suggested a graphic to show when to use each program.
- LM: The previously created graphic doesn't really show when each program should be used. Specifically, that once a building gets their benchmark from ENERGY STAR, then they would conduct bEQ to do an audit and get recommendations.
- RM: Dan also brought up a similar issue on the asset side of the program.
- DN: After reviewing the DOE Asset rating, the similarity in the input philosophy between it and COMCHECK (which has significant market penetration as a code compliance technique for building envelope) was evident. It is an approach that has been pursued and accepted by the marketplace to be significantly sensitive for use as a code compliance technique.
- LP: What does the committee mean by partnering with ENERGY STAR? They can't co-brand or endorse, so how specifically would bEQ work with them?
- LM: One way to partner is for bEQ to link to ENERGY STAR in a way that makes it easy to use the ASHRAE and bEQ products in conjunction with ENERGY STAR.
- MB: Agree that ASHRAE should not abandon the rating system. While it may not be viable in the US, part of the appeal is its applicability outside North America. In the US and Canada, ENERGY STAR has been accepted by so many entities that bEQ will not be able to supplant it. Thus, partnering with ENERGY STAR is a key recommendation.
- MB: Partnering means two things: ASHRAE doesn't really have a strong selling point to use bEQ to rate a building. bEQ focuses on the top and the bottom of the scale in that it clearly delineates the top end of the scale, but also brings a lot of tools to the table to help buildings on the bottom of the scale improve. So, bEQ is both a differentiator and a tool to improve building performance.
- MB: It is worth noting that Godfrey only did nine interviews and they relied very heavily on those interviews to make their recommendations. As per one of those recommendations bEQ need to tether the asset rating to the operational rating. The asset rating becomes an opportunity to focus on existing buildings from an asset evaluation standpoint.
- LM: An online portal certainly makes the program more user-friendly.
- LM: If ASHRAE is not getting bEQ rating submissions, is the program using the member's dues wisely? Riding the coattails of ENERGY STAR could help bring users to bEQ without spending \$500,000 on marketing.
- SC: Godfrey did their job to really help the committee look at the program, its purpose, and its traction. Look at what was said and if some recommendations are not correct, then the committee needs to guide Godfrey in the right direction.
- LM: What is the benefit to ASHRAE if a partnership with ENERGY STAR facilitates the link to a number of ASHRAE products?
- SC: Having ASHRAE products that work together and provide a coherent package is good, tying those projects into something that is recognized is also good. There is real value to bEQ being a vehicle to tie the ASHRAE audit to Std 100. ASHRAE needs to figure out how to communicate that tie in.

AI 1: Pratt to send bEQ- ENERGY STAR graphic in an editable format to Tim Wentz

d. Items #4: Marketing Recommendations ([Attachment A](#))

- LM: While ENERGY STAR can't market the combined solution, bEQ can be discussed in case studies at various venues and EPA can reference Standard 100 as an ANSI consensus standard. It comes down to how bEQ partners with ENERGY STAR on ASHRAE products.
- MB: ENERGY STAR marketing to some extent raises all boats – it helps all rating programs that have the goal to improve building performance.
- Ross: Previous attempts at an endorsement deal with ENERGY STAR fell flat, but there is hope that some level of partnership is still possible.
- LM: It is a mistake to suggest trying to link bEQ and ENERGY STAR directly as they are both rating systems. Rather, ASHRAE should suggest that approach that once a building has benchmarked and rated under ENERGY STAR, ASHRAE has tools that can help buildings get better. bEQ uses those tools in a standardized way.
- HD: Agree that trying to engage with ENERGY STAR on the broader toolkit that ASHRAE offers is going to be more productive. The committee can't really make a decision on the ENERGY STAR recommendations until the leadership meets with EPA.
- RM: How does the committee feel about the name recommendation?
- CE: ENERGY STAR is a good brand, but it is worth noting that it includes everything from light bulbs to appliances to buildings. It is a wide swath. And, there is some name recognition of bEQ, small as it may be.
- LM: ENERGY STAR is easy to say, bEQ is easy to say, Building Energy Quotient is not. It would be a shame to change what the current brand and lose the recognition that has been achieved so far -- to undo what has already been done. One suggestion is to go from Building Energy Quotient to just bEQ, just as ASHRAE went from the fully spelled out name to just ASHRAE. It would seem to make sense to focus more on content and to stay with bEQ and the "powered by ASHRAE" tagline.
- CE: ASHRAE is a strong brand and having that as part of the name is a good thing. The brand is especially strong if bEQ can be tied into the various standards (100, 90.1, 189.1).
- MB: Agree that this program does not sink or swim on a name change. The appeal of staying with "bEQ" is that that can be appended with an additional descriptor as appropriate (e.g., rating program, energy management tool, etc). It is not clear that it is worth the time and money to develop a new name.
- SC: The early thought was to not use the ASHRAE name in order to provide a broader appeal for bEQ; however, the ASHRAE Energy Audit brand doesn't suffer from having ASHRAE in the name. The ability to use a different tag line is also beneficial.
- RM: What are the committee's thoughts on the membership benefit of bEQ?
- LM: ASHRAE shouldn't be marketing bEQ as a membership benefit, but rather should highlight to the member the benefit of bEQ as an ASHRAE product. bEQ does not seem to be something that would motivate people to join ASHRAE other than being one of many ASHRAE tools that are available to ASHRAE members.
- LP: Does this suggestion need to be taken to Members council?
- LM: It doesn't seem to make sense to go to Members Council until bEQ has increased participation beyond the current level.
- MB: Once you tie the bEQ product to ASHRAE, then discussion of a member benefit becomes possible.
- HD: If/when the leadership meets with Energy Star, does Tim Wentz feel that he has a clear picture of the committee's feeling to steer him in that meeting.
- TW: If the leadership is able to schedule a meeting with EPA, an agenda with the committee's position will be created for Ross to distribute to the committee for review and input prior to the meeting.
- LM: It is important to note that EPA would not be partnering with bEQ, but rather would be partnering with ASHRAE.

- e. Items #5: Messaging Recommendations ([Attachment A](#))
 - Multiple committee members have noted that the use “optimization” is not appropriate in the messaging statement.
 - MB: The messaging recommendation that bEQ seeks to improve the performance of buildings worldwide is kind of a “motherhood and apple pie” statement.
 - LM: The statement doesn’t say much. The message needs to highlight a more tangible benefit to building owners, such as bEQ can help your building be more energy efficient, more productive, more whatever.
4. Next Steps
 - a. Letter Ballot votes due by COB on April 3
 - RM: intent of letter ballot is to find out which recommendations are problematic to the committee. This discussion will continue and there will be a face to face meeting.
 - The outcome of the ENERGY STAR meeting will also help dictate what happens at the face to face meeting.
 - b. Face to Face meeting May 21-22, 2015
5. Motion to Adjourn – **Meeting adjourned at 3:15pm EDT**

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Appendix G: Letter Ballot Results

| |
|--|
| bEQ Committee Letter Ballot 2015-1B |
| Multiple Issues (5) |

| |
|--|
| 7. Approval of Chicago Winter Meeting Minutes |
|--|

| | | | |
|---|-----|----|---------|
| | Yes | No | Abstain |
| I approve the minutes from the ASHRAE Winter Meeting in Chicago on January 25, 2015. | 8 | 0 | 0 |

Motion passes 8-0-0 CV (yes, no, abstain)

Reason for Negative/Abstaining Vote(s):

| |
|--|
| 2a. Acceptance of Marketing Plan Report |
|--|

| | | | |
|--|-----|----|---------|
| | Yes | No | Abstain |
| I accept the Godfrey Phase 1 (Insight & Strategy) report as presented during the March 4, 2015 conference call. | 8 | 0 | 0 |

Motion passes 8-0-0 CV (yes, no, abstain)

Reason for Negative/Abstaining Vote(s):

| |
|--|
| 2b. Approval for Godfrey to Move to Phase 2 |
|--|

| | | | |
|---|-----|----|---------|
| | Yes | No | Abstain |
| I approve directing Godfrey to move onto Phase 2 (Concept) work. | 3 | 5 | 0 |

Motion fails 3-5-0 CV (yes, no, abstain)

Reason s for Negative/Abstaining Vote(s):

- *Dan Nall – A lot of unresolved issues to determine what we are selling before we spend money on developing a sales program*
- *Harry Misuriello – The bEQ committee needs to agree on the future direction of the program and its place in the energy rating world.*
- *Filza Walters – There needs to be much more internal dialogue before we go ahead and authorize additional monies and time to be spent to take us in a direction. We need to be more clear on the direction internally.*

3. Approval of Program Recommendations

| | | | |
|---|-------------------|----|---------|
| | Yes | No | Abstain |
| I accept the Program recommendations as shown below. | 2 | 6 | 0 |
| I accept the <u>intent</u> of the Program recommendations but have concerns with the listed items: | Items of Concern: | | |
| | 1,2,3 | | |

Motion fails 2-6-0 CV (yes, no, abstain)

Reason for Negative/Abstaining Vote(s):

- *Larry Markel – bEQ should remain both a rating tool and an energy management (to some extent) tool. . We should explore adding our recommendations process to ES (although we will be competing with DOE’s Asset Score for that role) but also keep bEQ as an entity separate from ES. we can use parts of bEQ to augment ES.*
- *Dan Nall – ASHRAE bEQ is not currently an energy management tool. If Energy Star is the rating tool, we give up on the idea of reconciling ASHRAE Standard 100 with bEQ. Actionable recommendations are provided by an ASHRAE Level 2 audit, not by bEQ. The market wants IO ratings. I don’t think either the market or the marketing consultants understand the utility of an AD. The fact that the marketing effort has dropped the name Asset Rating in favor of As-designed Rating affirms the lack of understanding of the intent of the rating. I agree with item 6*
- *Michael Brandemuehl – I am fundamentally opposed to abandonment of the rating tool. The marketing can focus on its benefits as a tool for managing and improving energy performance, but there remain opportunities for the rating system to identify and recognize high performance buildings and for general use outside the US.*
- *Hoy Bohanon – As developed it is a benchmarking tool. It is not consistent with ENERGY STAR. In the past there was reluctance on part of EPA to endorse bEQ.*
- *Harry Misuriello – I don’t think bEQ qualifies as a true energy management tool.*
- *Filza Walters – There needs to be much more internal dialogue and research into how and if bEQ ‘should’ be an energy management tool, how and if we can ‘integrate’ and what the definition is of a ‘complete’ solution.*

4. Approval of Branding & Marketing Recommendations

| | | | |
|---|-------------------|----|---------|
| | Yes | No | Abstain |
| I accept the Marketing recommendations as shown below. | 2 | 6 | 0 |
| I accept the <u>intent</u> of the Marketing recommendations but have concerns with the listed items: | Items of Concern: | | |
| | 2,4,5,6 | | |

Motion fails 2-6-0 CV (yes, no, abstain)

Reason for Negative/Abstaining Vote(s):

- *Larry Markel – Disagree with updating name. Don’t try to replace or compete directly with ES. Let ES “raise all boats,” but continue to market bEQ (IO and AD) to appropriate markets and venues. We can explore linking with ES in some manner (see Ballot item #2), but this is not feasible. I don’t think bEQ is strong enough to recruit new members. Market is as part of the suite of ASHRAE products, tools, and TRAINING.*
- *Dan Nall – Too many issues to discuss here. Very important to determine what it is before discussing what to call it.*
- *Michael Brandemuehl – Until we further explore the constraints of working with ENERGY STAR, I oppose developing material to be used by EPA*
- *Hoy Bohanon – Again relies on EPA. Items 1,2,3,6 are good. Especially #2. Everyone wants to be a Star. No one wants to be a quotient.*
- *Harry Misuriello – Stick with the same brand name*
- *Filza Walters – I think we need to first understand items in ballot items above before making recommendations towards a name change/branding. Again, we need to know who we are first before we can have a clear marketing message to others and from others on our behalf.*

5. Approval of Messaging Recommendations

| | Yes | No | Abstain |
|--|-----|----|---------|
| I accept the Messaging recommendation as shown below. | 2 | 6 | 0 |
| I accept the <u>intent</u> of the Messaging recommendation but have a concern with it | 2 | 6 | 0 |

Motion fails 2-6-0 CV (yes, no, abstain)

Reason for Negative/Abstaining Vote(s):

- *Larry Markel – Do not use “optimization” – it is not an optimization tool. The message should have a more tangible relation to a benefit. “most comprehensive” sounds good, but what does it really mean?*
- *Dan Nall - Calling bEQ a building energy optimization program specified identifies that the speaker doesn’t know what optimization means*
- *Michael Brandemuehl – “Optimization” is the wrong word. It is a program for quantifying building energy performance and for guiding buildings to improved performance, but it is not optimization. The message is also generic enough that it risks irrelevance*
- *Hoy Bohanon – Presumes that we have decided to transform bEQ into an optimization program, which it is not today*
- *Harry Misuriello – I don’t think that bEQ can deliver on the promise in this message*
- *Filza Walters – I think we must determine as a committee and Society what we can and cannot deliver before we can attest to having the ‘most comprehensive’ energy ‘optimization program.’*

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Appendix H: Leadership Meeting Notes

Notes on Leadership Meetings
EPA, BOMA and USGBC
April 27 and 28, 2015

EPA – Energy Star

Jean Lupinacci, Chief Energy Star, Commercial

The meeting with Jean Lupinacci went well, as a whole. Some of the more important points made during the meeting include the following:

- EPA - Energy Star is excited about the passage of the Sheehan-Portman law and the introduction of Tenant Star contained therein.
- EPA-Energy Star has not kept current on the various changes in the bEQ program. Because EPA-Energy Star is no longer active on the bEQ committee, they are uncertain of how Energy Star and bEQ match up.
- Energy Star does not consider themselves a competitor to anyone. They will support any program that strives to conserve energy.
- I gave a short overview of the Godfrey report and focused on the fact that Godfrey recommends we de-emphasize the rating aspect of bEQ and focus instead on bEQ as an energy management tool. Between Energy Star and bEQ, they provide the best cumulative approach.
- Energy Star admittedly does not provide a path forward to improve energy efficiency
 - About 400,000 buildings are benchmarking with Portfolio Manager and approximately 70% are eligible to receive a score
- Energy Star is updating its models (this is the third time they have done this)
 - Therefore a score in 2014 will not be comparable to a score in 2016 (projected date of update)
 - What will happen is that the past scores will be recalculated using the new models
 - It will go back in time and recalculate existing buildings
- Energy Star does in fact “partner” and “cross promote and market” with other organizations, so it is possible Energy Star could do the same for bEQ. Two examples:
 - USGBC – They partner with USGBC for the following reasons:
 - USGBC uses Energy Star as a portal for LEED Multi-family buildings
 - Easy for EPA to state that the two are complimentary when USGBC uses Energy Star as a portal
 - Using an alternate compliance path is OK
 - When there is a technical issue both technical staffs meet and resolve the issue
 - Both technical staffs may have an annual meeting
 - Industry – Software vendors are a good example
 - Work with them to provide a link to harvest data directly into their software
 - Opens them up to Energy Star awards (vendor of the year, etc.)

- Tries to use their website to connect to their partners and vendors
- EPA-Energy Star would be willing to set up a relationship with bEQ similar to the relationship with USGBC
 - Needs specific issues to address
 - Willing to meet with us to help us evolve into a better program (Jean's words, not mine.)
 - The more we diverge from Energy Star (i.e. Standard 100), the more difficult it will be to partner with Energy Star.

BOMA

Henry Chamberlain, President and Chief Operating Officer

hchamberlain@boma.org

The meeting with Henry and Kevin Fry, Director of Codes and Standards, went very well. The bEQ program was brought up towards the end of the meeting during the discussion on BOMA's 360 program.

- BOMA 360 currently uses Portfolio Manager for the energy piece of the program
- Would be willing to use ASHRAE's bEQ as an alternate compliance path

USGBC

Brendan Owens, Chief of Engineering

bowens@usgbc.org

The meeting with Brendan Owens and Brian Howard, Legislative Director, also went very well. We broached the subject of LEED using the bEQ program as an alternate compliance path to identify energy savings and thus acquire point or, at least, satisfy the prerequisite.

- Brendan Owens indicated that it was possible to include bEQ and something USGBC might be inclined to consider.
- Brendan noted that LEED has a proposal going forward to establish thresholds/metrics in two areas (energy and carbon) that might well align with bEQ. Brendan also noted that LEED goes through the same kind of process every time a new AEDG comes out, so it would not be unprecedented to consider bEQ as a part of the new metric.
- Brendan noted that LEED would need a concrete proposal from ASHRAE to modify the existing structure. The proposal can come from ASHRAE and then through their channels.

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Appendix I: bEQ Program Goals

bEQ Program Goals – Past, Present, Future

- Generate income to ASHRAE Society and to ASHRAE members/business
- Standalone rating/labeling program, tool, and database with enhanced features and benefits to include more occupancy types and climate zone choices, etc.
- Provide a platform to report building energy usage to state and local jurisdictions
- Provide information for disclosure and real estate transactions
- Move the built environment towards high performance and net/near zero energy buildings
- Provide a tool for owners to assess and/or benchmark the energy efficiency of their building(s)
- Help building owners develop more energy efficient buildings
- Harmonize modeling outcomes between Std 90.1, Std 189.1, LEED, and bEQ
- Program that supports and feeds into other rating programs (ENERGY STAR, BOMA 360, etc)
- Adaption to serve the global building community of buildings
- Provide a program that provides best practices for effective energy management of buildings
- Add features to bEQ that allow for water efficiency labeling, inventory management, etc.
- Expand scope of bEQ to other combination rating parameters such as cataloging and disclosing more IEQ and IAQ
- Future enhancements such as better automation, cataloging, Smart phone App.

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Appendix J: Well Building Standard

WELL BUILDING STANDARD

There is a new Well Building Standard that is offering certification on buildings. It is put out by the International Well Building Institute (IWBI) who has partnered with USGBC and LEED. They are also using the same group as LEED to third party certify their building certifications (Green Building Certification Institute).

What is interesting to me is that they have carved out a unique niche in a very crowded market and articulated that niche in a very nicely done executive summary (see link below).

In addition, they have entered into a partnership with LEED and have sponsored a well building symposium.

I've included some links to this information below:

- IWBI website: <http://www.wellcertified.com/>
- Certification information: <http://www.wellcertified.com/certification>
- Program launch: <http://www.wellcertified.com/articles/international-well-building-institute-launches-well-building-standard%C2%AE-version-10>
- Executive Summary: http://trove.com/a/Can-a-building-standard-help-you-live-a-healthier-life.jNlnK?chid=192151&utm_source=webapp&utm_medium=tw
- Partnership with LEED: http://trove.com/a/Can-a-building-standard-help-you-live-a-healthier-life.jNlnK?chid=192151&utm_source=webapp&utm_medium=tw
- 1st Annual Symposium: <http://www.wellcertified.com/articles/international-well-building-institute-announces-inaugural-well-building-symposium-take>

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Appendix K: Site vs. Source Energy

Question: Should bEQ revisit the decision to go with source energy (vs. site energy)?

Note from Lilas Pratt (April 2015):

- Now that bEQ is more closely tied with Standard 100 (which emphasizes site energy) than with ENERGY STAR (which uses source energy), does it make sense for bEQ to calculate and express the rating in site energy rather than source energy? I can think of a number of arguments both ways, but I guess the main reason for the question is that it would be another way of distinguishing the program from ENERGY STAR.
- It occurs to me that the bEQ may be better able to achieve its other goal of putting more emphasis on the energy management aspects of the program if it is not using ENERGY STAR's system. And, it might be easier to position it as the next step after ENERGY STAR if it is not just duplicating what ENERGY STAR is already doing.
- From an Energy Management perspective, the committee may want to consider changing bEQ to site energy because from an energy management perspective, building managers and facility engineers are likely to be more concerned with what is happening in their building (how much energy am I using in my building, what is the EUI of my building, what is the energy cost of my building) rather than the grid implications of their energy use.
- When bEQ was using Portfolio Manager and Target Finder, the program got a lot of criticism for being an ENERGY STAR clone and the feedback was, "why use bEQ, when I can just use ENERGY STAR." If bEQ wants to be the next step after ENERGY STAR, I think it needs to be a different step and not just a duplicate with a few more things added on.

Thoughts from Neil Leslie (May 2015):

- It would be technically flawed and biased against mixed fuel buildings for bEQ to shift its metric from source energy to site energy. Standard 100 uses a technically flawed site EUI compliance requirement for all buildings that is inherently unfair to mixed fuel buildings. The flaw can be remedied by the use of a source energy metric, energy cost metric, or environmental metric such as greenhouse gas emissions. The Standard 100 technical flaw encompasses three key areas:
 - Energy efficiency investment decisions within any mixed fuel building favor lower site energy electric options over lower operating cost and lower source energy non-electric (e.g., natural gas) options for compliance.
 - Comparisons between a mixed fuel building and similar all-electric building favors the all-electric building based on its site energy performance, even though it has higher operating costs and higher source energy consumption than the mixed fuel building.
 - It is inherently more difficult for a mixed fuel building to comply with the flawed site energy compliance requirement in Standard 100 compared to a similar all-electric building because of the higher site energy efficiency of electric technologies.
 - I have just become a voting member of SSPC 100. The SSPC has acknowledged the challenges for mixed fuel buildings, and we are currently working on the best way to add source energy compliance requirements, and possibly energy cost compliance requirements, into Standard 100 to address the problem.

Thoughts from Gordon Holness (May 2015):

It depends upon what you are trying to achieve and there is no simple or perfect answer.

- Over the years I have had many such discussions with DOE, GSA and EPA representatives and while they may have idealized the preference for Source the realities have always brought us all back to fundamentals. Why are you measuring building performance and how are you achieving it.
- Even the tracking of our advancement of Standard 90.1 over a 40 year period of time has come back to analysis of actual energy use within the building i.e. Site Energy. (I understand that DOE is reconsidering their move towards Source analysis)
- Obviously Standard 100 uses Site Energy as the performance metric and comparison against Energy Targets established around CBECS and RECS. We are certainly considering (and will probably shortly release) addenda that enable AHJs to convert Site Energy to Primary Energy (Source or Cost) but Site Energy will remain the primary measurement because it is based upon fundamental metered energy use.
- Why is that important? Because the greatest impact on actual building energy use is not the efficiency of the electric chiller or gas boiler or even the lighting system – it is the building occupant. And they do not care which meter is spinning faster - gas or electric or how that energy was produced.
- So back to your question on bEQ. If you want to encourage Building Owners to use bEQ then you must address their fundamental needs of performance comparison to their peers and reduction in building energy costs. What have you learned so far – They want an “A” rating.
- Let me wrap this up by saying that building owners and most municipalities generally don’t care how electric power is generated -nuclear, coal, gas, wind or hydro (which are Source issues) they only care how much is used (which are Site and Grid distribution issues).

Thoughts from Steve Rosenstock (May 2015):

Thanks for letting me provide input. Using site energy would be the more logical choice for the following reasons:

- It aligns better with ASHRAE consensus building energy codes, such as ASHRAE 90.1, 90.2, 100, and 189.1. All of the prescriptive efficiency requirements for appliances and equipment are based on site (point of use) energy usage.
- It adds precision. Source energy estimates always begin with a site energy calculation, which is then multiplied by an estimated site-to-source conversion factor. Such conversion factors are inherently backward-looking static generalizations about an increasing dynamic process. The most technically accurate statistic relative to building energy use will always be its site energy consumption.
- Site energy is measureable (metered) and verifiable, whereas source energy numbers are, at best, gross estimates.
- It aligns better with ASHRAE policy statements. Please see ASHRAE’s input to DOE on zero energy buildings (attached), where ASHRAE recommended using site energy, especially for buildings with on-site energy production and energy storage where energy crosses the building site boundary.
- It aligns better with what the market wants. Please see the attached study performed for DOE’s Commercial Building Asset Rating program, where building owners showed a clear preference for using site energy (file page 17 of 40, report page 11).

“Comparing site energy use versus source energy use is confusing or does not provide value.”

- Page 1 of the asset rating report compared site energy use and source energy use. Several building stakeholders did not find the source energy use information helpful because they are more concerned with site energy. For example, one participant commented

“When I first looked at this in trying to figure out what it all meant, I ended up just focusing on the “site energy use,” I mean, thinking that the “source energy use” really wasn’t going to be on anyone’s high priority list of evaluations when they’re looking at buying a building.” And another participant has this to say about source information: “As a building owner...do I really care about source energy use? ...I’m just more focused on what’s it costing me.”

- In addition, a few building stakeholders were confused by source energy and did not understand the purpose of presenting the information.”

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Appendix L: Fundamental mission/vision/objectives

General/Overview:

- If we were to go back to “ground-zero” and start with a clean sheet of paper, “Where the bEQ program should be going, moving forward from now”?
- What should our new fundamental principles, assumptions, and objectives be? Moving forward.
- How do we deal with the US centric versus global needs for bEQ?
- What bEQ should become? What are we selling? From a purely technical basis? Focused on “energy”? Growing to more IEQ/IAQ and disclosure features? What other features or benefits should be added? Deleted?
- Do we want to be a rating, labeling, energy management, disclosure, and benchmarking tool? Or some combination?
- Is one of our objectives to stay a tool for managing and improving energy performance of buildings, including high performance and Net (near) zero.
- Can our current or future methodology claim that our AD and IO ratings truly relate to each other?

Niche in the market / Relationships with outside organizations / Within ASHRAE :

- What is our “place or niche” in the “energy rating world”? Tough talk about what’s feasible, the likely risks and rewards.
- How can bEQ collaborate/coordinate with “EPA (Energy Star) and DOE (Asset Score)” programs moving forward from now?
- Has bEQ methodology morphed into something that may/may not be palatable to EPA/DOE?
- What ASHRAE publications and/or standards does bEQ want to be associated with moving forward? I.e., PMP, 100, 90.1, PCEA, 55, 62, 180, 189?
- It has been suggested that bEQ’s process for recommending energy saving measures, and coupling it with an energy audit, are strengths that could be imbedded/linked in other rating systems (BOMA 360, Portfolio Manager, LEED, GG, etc) .
- Should bEQ continue to report to the BOD?, or go under another Council or Committee ??

Specific issues from the objectives and niches, including program features, marketing strategies, and resources:

- How do we gauge success in the future? # of submissions, # of downloads?
- What do we realistically think we can achieve in number of AD and IO ratings? Who would be most interested (location/country, high- or low-performing buildings, market segments, types of facilities)
- Does the bEQ program need to have one “set of features, forms, benefits, and procedures” for the USA? And another for other global countries?

- Do we keep our current grading scale? Letter, score, descriptor words, bar length and color?
- Do we want to keep our “bEQ” name? Change it? Modify it?
- What enhancements are important for bEQ? Time-series dashboard? Web portal inputs? GIS- and map linkages? Ability to import directly data from other systems such as Portfolio manager, BOMA 360, Green Globes, LEED, etc.? Ability to export bEQ workbooks or analyses directly to other systems?
- What should our marketing strategies be, moving forward? Should we have the new ASHRAE marketing department more involved in bEQ marketing in the future?
- What ASHRAE resources should be dedicated to bEQ?
- Regarding bEQ committee membership, do we need to increase/decrease its size? Do we need to add members related to materially affected parties, such as EPA/DOE/BOMA, etc.; GGAC, AASA, more liaisons?
- How will any new direction(s) affect our current/proposed future budgets?

Specific to Godfrey Recommendations

- What are the go/no-go points (as listed above) for the Godfrey list of Program, Marketing, and Messaging recommendations at this time? Which ones are a “go”?
- Regarding the “no-go” points, how can they be re-worded or changed to become agreeable?
- Regarding the “no-go” points, which ones are completely rejected?
- Messaging? What is a replacement word for “Optimization”? Perhaps, “most comprehensive” and/or “quantifying building energy performance and guiding buildings to improved performance”?

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Appendix M: Open Action Items

May 21-22, 2015 Atlanta meeting:

- **AI 1: Montgomery and Brandemuehl** to determine strategy and timing for follow-up meetings with EPA, BOMA, and USGBC after July 1 (including strategy about LEED compliance paths).
- **AI 2: Montgomery** to follow-up with **TC 7.6** to request that the PCBEA rewrite include bEQ in the energy benchmarking requirements.
- **AI 3: Montgomery** to follow up on the suggestion to reach out to municipalities and universities with sustainability plans
- **AI 4: Pratt** to add **Mark Ames** and **Jim Scarborough** to all future copy lists for meetings and information.
- ✓ **AI 5: Montgomery, Brandemuehl, and Pratt** to write up the modified recommendations for Godfrey. (Note: modified recommendations sent to Godfrey on 5/23/2015.)
- ✓ **AI 6: Pratt** to find and distribute the notes from previous discussion on building types for the As Designed rating. (Note: information sent to Methodology SubC on 6/4/2015.)
- ✓ **AI 7: Pratt** to invite **Nora Wang** to Methodology subcommittee meeting at ASHRAE Annual meeting in Atlanta. (Note: email sent on 6/8/2015.)
- **AI 8: Marketing subcommittee** to develop a recognition program for submitters.
- **AI 9: Larry Markel** to draft a plan for initiating a prototype in Orlando for expanding ASHRAE products and services in other municipalities.
- **AI 10: Methodology subcommittee** to generate a concept for bEQ LITE and bring back to committee.
- **AI 11: Marketing subcommittee** to create a plan to present to EPA on how to integrate/link bEQ and potentially bEQ LITE with ENERGY STAR Portfolio Manager.
- **AI 12: Methodology subcommittee** to look at mapping ENERGY STAR Portfolio Manager against bEQ scores.

April 1, 2015 Conference Call

- ✓ **AI 1: Pratt** to send bEQ- ENERGY STAR graphic in an editable format to **Wentz**.

January 25, 2015 Chicago Winter Meeting:

- ✓ **AI 1: Hoy Bohanon** to contact TC 9.9 regarding the EPA data set for data centers.
- ✓ **AI 2: Markel and Patenaude** to draft up a plan on working with the City of Orlando for **David Underwood** to present to ExCom. (Replaced by May 14, AI 9.)
- **AI 3: Michael Brandemuehl** to have **Methodology Subcommittee** evaluate the submission review process for further automation and speed.
- ✓ **AI 6: Montgomery** to ask **Steve Comstock** for Journal articles guidelines on bEQ subject matter.
- **AI 7: Pratt** to send **Nate Boyd** information on previous bEQ Journal articles.

- **AI 8: Brandemuehl** to work with **Krishnan Gowri** on his request to incorporate bEQ into the rapid capture for energy modeling project.
- **AI 9: Eley** (Standard 189.1 Liaison) to explore the use of bEQ as a compliance tool with outcome based codes with Standard 189.1 as appropriate.

November 16-17, 2014 Atlanta meeting:

- ✓ **AI 7: Committee members** to provide feedback to **Ray Patenaude** on the concept of the video he is working on with **Ross Montgomery**. A link will be sent to the committee.
- ✓ **AI 8: Committee members** to communicate to **Ross Montgomery** and **Jim Colton** on potentially interested parties that would benefit from the Terry Townsend training program.
- **AI 11: Lilas Pratt** to work with **Steve Comstock** to add “Powered by ASHRAE” to the bEQ headers on the website and workbooks and to determine if the phrase is registered.
- ✓ **AI 12: Lilas Pratt** to work with **Charles Eley** as needed to complete the updates to the bEQ In Operation and As Designed workbooks.
- ✓ **AI 13: Lilas Pratt** to coordinate with **Jodi Scott** to create press releases about changes to bEQ approved during this meeting (when those changes occur) including extension of the “free submission” offer, addition of mixed use buildings, and campuses, beta launch of As-Designed rating, etc.
- ✓ **AI 16: Methodology Subcommittee** to finalize the research project Work Statement to reconcile bEQ methodologies with ASHRAE Standards.
- ✓ **AI 17: Charles Eley** and **Harry Misuriello** to communicate to SSPC 189.1 (Eley) and SSPC 90.1 (Misuriello) about the planned bEQ research project and potential tie-in between bEQ and these standards.
- ✓ **AI 19: Ross Montgomery** and **Michael Brandemuehl (lead)** to put together an editorial write-up for the ASHRAE Journal on the research project intent and benefits. Write-up to be reviewed by **Larry Markel**.

August 27 & 29, 2014 Methodology SubC Conference Calls

- **AI 6: Pratt** to modify As Designed procedure instructions, for review by the bEQ Committee, to reflect that fully designed buildings can get a preliminary label that would then be verified after construction is complete. – **Ongoing as part of Workbook updates**

June 29, 2014 Seattle Annual Meeting

- **AI 1: Eley** to lead an effort to write a conference paper for the bEQ In Operation process and methodology. (On Hold)

May 21, 2014 Marketing Subcommittee Conference Call

- **AI 6: Nall** to put together a first draft for an ASHRAE HQ building case study with help from **Walters**.

January 19, 2014 New York Winter Meeting

- **AI 4: Pratt** to catalog articles about bEQ on the ftp site for access by the **Committee**.

December 15-16, 2013 Atlanta Meeting

- ✓ **AI 1:** Lilas Pratt to contact EPA about providing a consultant for the bEQ committee roster.

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