

**Building EQ Committee
Las Vegas Winter Conference
January 29, 2022
Meeting Minutes**

ATTENDANCE (*Note: * indicates on-line participant*)

Participants: Rob Risley, Chris Balbach, John Constantinide, Mahroo Eftekhari*, Charles Eley*, Daniel Redmond*, Anoop Peediyakkan, Doug Cochrane,

Not Available: Trent Hunt, Michael Deru, Tim McGinn

Staff: Lilas Pratt, Stephanie Reiniche, Connor Barbaree, Emily Porcari,

Guests: Mick Schwedler, Bill Dean*, Billy Austin, Stephen Roth*, Darryl Collerman*, David Handwork, Harrison Kesling, Jarad Larson

PRINCIPAL MOTIONS¹

Motion 1: Chris Balbach moved, and Anoop Peediyakkan seconded that the Building EQ committee recommend to the BOD that up to \$15,000 be approved for the addition of a carbon metric to the Building EQ Portal, contingent upon approval by the Task Force Building Decarbonization (TFBD).

Vote: 6-0-0, CNV (Note: Trent Hunt voted via proxy through Doug Cochrane)

Motion 2: Chris Balbach moved, and Anoop Peediyakkan seconded that that \$8500 be approved to update the electric site-source factors in the Portal to match the most recent 189.1 site source factor upgrade.

Vote: 6-0-0, CNV (Note: Trent Hunt voted via proxy through Doug Cochrane)

NEW AND OPEN ACTION ITEMS

January 29, 2022 Las Vegas Winter Meeting

- **AI 1:** John Constantinide and Lilas Pratt to continue updating the HQ building In Operation rating monthly rolling in the PV until we have a full year of PV.
- **AI 2:** Lilas Pratt to send an email to David Handwork outlining some of the other work going on within Building EQ that he might be interested in.

January 20, 2022 Las Vegas Virtual Winter Meeting

- **AI:** Technical Subcommittee to review reward criteria for any needed tweaks for next year. (On-going)

¹ All votes are recorded as yes-no-abstain.

January 13, 2022 Technical Development Subcommittee Las Vegas Winter Meeting

- **AI 1:** Lilas Pratt to set up a call with Stephen Roth, Chris Balbach, and Michael Deru on the BETTER tool. (On-going)

December 15, 2021 Business Development Subcommittee Web Meeting

- **AI 2:** Lilas Pratt to work with Doug Cochrane to develop an “elevator speech” for outreach to ASHE. (On-going)

November 9, 2021 Business Development Subcommittee Web Meeting

- **AI 1:** Lilas Pratt to reach out to Vicki Worden at GBI to ask about their partnership with GRESB. (On-going)
- **AI 4:** Lilas Pratt to reach out to Rick Hermans about a meeting with ASHE (On-going)

October 14, 2021 Technical Development Subcommittee Web Meeting

- **AI 1:** Chris Balbach to put together a presentation for a NYSERDA FlexTech meeting in November (**on hold**).

October 12, 2021 Business Development Subcommittee Web Meeting

- **AI 6:** Lilas Pratt to reach out to ASHRAE Marketing about updates to the Building EQ webpage. **On-going**

February 2, 2020 Business Development Subcommittee Orlando Winter Meeting

- **AI 2:** Lilas Pratt to mine some data from the list of universities downloading course material and provide to the committee for follow-up by the committee. (*Note: Need to request a new list of downloads*) **Open**

January 12, 2019 Business Development Subcommittee Meeting

- **AI 3:** Lilas Pratt to develop French Portal examples (screens/reports/etc.) for use on sales calls to Hydro Quebec. **On-hold**

MEETING NOTES

1. Call to Order – **Meeting convened at 8:02am PST.** Quorum was established.
2. Review of Agenda (Risley)

Motion: Chris Balbach moved, and Dan Redmond seconded that the agenda be amended as discussed.

Vote: Motion passed by unanimous voice vote.

3. Address from Society President (Schwedler)
 - Mick Schwedler thanked the committee for the work being done and reminded the committee that they should continue to ask for support and let the BOD know now they can help.

4. New Business

a. ASHRAE HQ Building EQ In Operation rating

- The In Operation rating is being updated monthly by adding each new month for a rotating 12 months of data. The first three months of data (Oct-Dec) with the operational PV solar panels moved the score from 30 to 26. An extrapolation of that data to a full year of solar moved the score to 11.
- Because these were all winter months, the actual full year of data with summer months should bring the score down further. The projection is for the score to be between 5 and 8 at that point.
- It was also noted that the building is still undergoing some tweaks with the systems that could further improve the score once those are addressed.
- The Solar panels are independent of the building and feed into a separate meter where the power is regulated by Georgia Power. Rate structures were not discussed at this time. The rate structure allows them to use the solar in the building or send it back to the grid. GA Power also limits the size of the array that can be installed.

AI 1: John Constantinide and Lilas Pratt to continue updating the HQ building In Operation rating monthly rolling in the PV until we have a full year of PV.

b. [Adding Carbon Metric](#) to Building EQ Portal

- As previously noted, the committee had been asked by the Task Force for Building Decarbonization (TFBD) to add a carbon metric to the Portal. Building EQ has now been asked to bring a motion to the BOD to ask for the money.
- The changes required in the Portal include a base upgrade to add the U.S. eGrid tables and calculations from Standard 189.1 and then additional tables to be added to accommodate additional countries or regions outside of the US.
- The base upgrade will need to be completed first and then additional countries can be added as the information is available. The committee will need to reach out to local chapters in order to get the specific information for the grid in each specific country or region to be added. Once the changes are made, the information can be updated in the Portal as needed at no additional cost.
- The specific changes would add a new tab with three operational carbon metrics to the Portal:
 - $\text{CO}_2\text{e}/\text{y}$ = the absolute quantity of GHG emissions per year for the building expressed in metric tons, kg or lb.
 - $\text{CO}_2\text{e}/\text{ft}^2\text{-y}$ = the total emissions per year for the rated building divided by the conditioned floor area of the building. This would enable different size buildings to be compared. For some building types, emissions could be normalized in other ways, e.g., CO_2e per meal served, per occupied guest room, etc.
 - $z\text{CEF}$ = a *Zero Carbon Emissions Factor* could be calculated as the ratio of the rated building emissions to the baseline building emissions. This term is being considered for Standard 189.1-2023

Motion 1: Chris Balbach moved, and Anoop Peediyakkan seconded that the Building EQ committee recommend to the BOD that up to \$15,000 be approved for the addition of a carbon

metric to the Building EQ Portal, contingent upon approval by the Task Force Building Decarbonization (TFBD).

Discussion:

- The Portal would be set up so that the tables with the factors could be easily updated as emission rates change. The main thing that changes is the mix of electricity – this can be set up to allow this to be easily changed as well.
- Charles Eley noted that there is work within ASHRAE to get all the different rates within ASHRAE to agree (189.1, 105, etc).
- There is some concern that the factors may not be granular enough to support what is happening in New York. Because this change is being handled via tables, that level of customization should be doable. This customization within a state is very similar to customizing by country.
- The request will be to split the funding between FY 21-22 and FY 22-23.

Vote: 6-0-0, CNV (Note: Trent Hunt voted via proxy through Doug Cochrane)

c. [Updating Site-Source Conversion Factors](#) in Building EQ Portal

- The committee discussed updating the site-source conversion factors for electricity to match 189.1 in the Portal to match the current site-source conversion factors used by 189.1. The factors currently in the Portal no longer accurately represent the current conditions on the grid.
- The changes would address the conversion factors for all methodologies currently in the Portal (Standard 100, Laboratories, Zero Tool for Energy Star Buildings).
- Once these changes are made to the Portal, the site-source conversion factor can be updated in the future at no cost.

Motion 2: Chris Balbach moved, and Anoop Peediyakkan seconded that that \$8500 be approved to update the electric site-source factors in the Portal to match the most recent 189.1 site source factor upgrade.

Discussion: The Building EQ budget covers this cost. The change will be reported to the BOD as information item in the report and will reference the motion for carbon metric.

Vote: 6-0-0, CNV (Note: Trent Hunt voted via proxy through Doug Cochrane)

5. Review of new As Designed PRM Methodology (Roth)

- Stephen Roth demonstrated the changes to As Designed rating that include the PRM Methodology. The changes are still in Beta stage but are targeted to go live in February or March.
- Stephen also demonstrated the API that is being developed and documented for this new methodology. This uses XLMschema via BuildingSync (developed by ASHRAE).
- Once the engineer/architect has done all the PRM analysis for the As Designed rating, transferring the data to Building EQ will be automatic using the API BuildingSync protocol.
- This is groundbreaking stuff for Building EQ. The committee needs to demonstrate and document this change.
- Reports are not currently available for the As Designed rating. The API just returns a number at this time. The committee needs to explore what reports make sense for 3rd party use cases.

6. University use of Building EQ Portal – Involvement/Feedback

- David Handwork is the APPA liaison to ASHRAE. Darryl Boyce is the counterpart to APPA from ASHRAE.
- There was a meeting on the workplan between APPA and ASHRAE, and APPA reinforced that they really want to continue to engage on Building EQ as a method to develop reinvestment capital.
- The decarbonization of universities and campuses is now a big topic. Most university campuses are very heavy with existing buildings that are very old.
- APPA would like to look at joint white papers, joint sponsoring awards, advancing Building EQ use on campuses. Universities are like small cities and living labs
- The committee will work with Daniel Redmond to look at synergies.
- One suggestion was to use APPA to help publicize the Energy Genius Award next year.

AI 2: Lilas Pratt to send an email to David Handwork outlining some of the other work going on within Building EQ that he might be interested in.

7. Review of Research Projects

- Chris Balbach provided an update on the status of RP-1836. This research project is developing a standardized characterization system for energy efficiency measures (EEMs). The goal was to develop a taxonomy. The team selected uniforma as the schema to map the EEMs into. BEEDS was also used.
- The work will be published on <http://data.ashrae.org>, and there will likely be follow up project. The project is important to BEQ because of the list of EEMs. The suggestion will be that the list of EEMs be tagged as per the project.
- As a co-sponsoring committee for the project, Building EQ will be asked to approve the final report once complete.
- Chris Balbach provided an update on the status of RP-1771.
- It was noted that the code adjustment factors may be the most useful part of the research along with the sensitivity studies that show the impact of changes to the building. Some of these could be incorporated into the Portal to help users see the impact of proposed measures.
- The final report is in process. As the cognizant committee for the project, Building EQ will be asked to approve the final report once complete.

8. Upcoming Meetings

- BEQ Business Development SubC, 2nd Tuesday at 11:30am
- BEQ Technical Dev (Method) SubC, 2nd Thursday at 11:00am

9. Adjourn – **Meeting adjourned at 12:26pm PST**

Building EQ Portal Expenditure Quote

Adding the Carbon Metric to the Portal involves two parts:

- Base changes to include the 189.1 tables that cover the US at \$6500.
- Addition of each additional world region (like Canada) at \$500/region.

Total cost is dependent on how many regions are added.

Expected cost range is \$10,000 to \$15,000.

The **Site Source conversion factor update** involves four parts:

- Standard 100 methodology (included in maintenance)
- Laboratory methodology (this methodology was designed to allow for site-source upgrades, included in maintenance)
- Energy Star methodology (as detailed in specification by Charles Eley) at \$5000.
- Changes to retain Building EQ Performance Scores based on previous site-source factors for approved submissions at \$3500.

Total Cost = \$8500

Previously approved expenditures:

- Total expenditure for PRM Methodology upgrade approved at \$26,500.
- The committee's development budget for SY 21-22 is \$32,000.
- The committee also has \$10,000 in the promotion budget that can be reallocated to development.