

AGENDA
TC 7.6 Building Energy Performance
Monitoring and Energy Performance Subcommittee
2019 ASHRAE Annual Meeting, Kansas City, MO
Monday, June 24, 2019, 2:15 – 4:15 pm

Purpose: TC 7.6 is concerned with the estimation, measurement, analysis, benchmarking, and management of whole building and building systems energy and water performance. This includes performance and resource management of new and existing buildings. This sub-committee implements this scope by monitoring the state of governmental policy, data, and tools addressing building energy and water performance (especially building benchmarking and energy auditing), and by developing ASHRAE programs and courses on these topics.

1. Introductions

2. ASHRAE Standards and Guidelines

- a. **Standard 100-2018**, *Energy Efficiency in Existing Buildings* – RTAR to update targets to 2012 CBECS data approved and moving forward; interest in increasing adoption of Std. 100
- b. **Standard 105-2014**, *Expressing and Comparing Building Energy Performance and Greenhouse Gas Emissions* – Currently working to finish update and get out for review.
- c. **Standard 211-2018**, *Standard for Commercial Building Energy Audits* – Published; Green Book currently/actively being updated and rewritten as Best Practices
- d. **Standard 189.1**, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings* – Update published as 2018 International Green Construction Code.
- e. **Standard 228P**, *Standard Method of Evaluating Zero Energy Building Performance* – SPC approved and call for committee members out.
- f. **Guideline 14-2014**, *Measurement for Energy, Demand, and Water Savings* – Title Purpose and Scope approved; working on various updates.
- g. **Guideline 34-2019**, *Energy Guideline for Historic Buildings* – Published; no further committee meetings scheduled at this time.
- h. **AEDG, Achieving Zero Energy series** – Two zero energy guides now published (K-12 Schools and Small to Medium Offices).

3. Project Announcements and Updates

- a. Proposed Working Group to update ASHRAE's Performance Measurement Protocol – follow-up to RP-1702 (Hunn)
- b. Other

4. Governmental Policy

- a. Municipal
 - i. In May 2019 NYC enacted LL97 of 2019, which sets carbon emissions intensity caps for energy use in commercial and multifamily buildings greater than 25,000 square feet. Limits set for 10 building categories based on Building Code occupancy groups. Buildings may comply through renewable energy credits and/or offsets. Initial compliance period from 2024-2029; limits will then be lowered in five-year intervals to meet 80% reduction by 2050. Covered buildings represent ~60% of the city's floor area. Summary and FAQ: <https://www.urbangreencouncil.org/content/projects/all-about->

- [nyc%E2%80%99s-historic-building-emissions-law](#). Additional perspective: <https://www.bclplaw.com/en-US/thought-leadership/new-york-city-enacts-greenhouse-gas-emission-limits-for.html>
- ii. Comparing NYC's LL97 and Washington DC's Clean Energy DC Omnibus Act (passed in December 2018): LL97 based on carbon intensity and allows offsets, while DC's law based on ENERGY STAR score. For more comparison: <https://www.imt.org/a-dc-vs-nyc-comparison-that-matters-what-you-need-to-know-about-both-cities-bold-new-building-performance-laws/>
 - iii. City Energy Project Resource Library launched in February 2019. Contains best practice advice/information for cities and policymakers working to improve building energy efficiency: <https://www.imt.org/new-city-energy-project-resource-library-gives-cities-a-blueprint-for-climate-action/>
- b. State
- i. In May 2019, the State of Washington became the first state to adopt an existing buildings energy performance standard through its Clean Buildings Act (State House Bill 1257). The bill requires Washington's Commerce Department to develop a state energy performance standard for covered commercial buildings that sets EUI targets for each building type. ASHRAE Standard 100-2018 is to be used as the initial model for the standard. Applies to larger existing commercial buildings. Covered buildings over 220,000 square feet will have to meet EUI targets or comply conditionally by 2026; buildings over 50,000 square feet by 2028: <https://www.imt.org/washington-blazes-a-trail-for-state-action-on-energy-efficiency/>. For the full legislation: <https://app.leg.wa.gov/billsummary?BillNumber=1257&Year=2019>
- c. U.S. Federal
- i. In May 2019 ASHRAE and the DOE's Office of Energy Efficiency and Renewable Energy signed an MoU. MoU includes the following goals of note for this subcommittee:
 1. *"Encouraging the continued development of voluntary consensus-based standards related to energy efficiency."*
 2. *"Cooperation to provide and encourage the use of clear and consistent information to the building industry about building energy rating and labeling."*
- d. International
- i. New C40/LBNL manual: Using Data for Policy: A Manual for C40 cities. Includes best practices for data collection, cleansing, analysis, and results communication: https://c40-production-images.s3.amazonaws.com/other_uploads/images/1707_Data_Manual.original.pdf?1522871507
 - ii. NYC Urban Green Council launched Global Climate Efficiency Trading Initiative, a collaboration between NYC energy stakeholders, trading community, and global peer cities Hong Kong, Singapore, Toronto. Intent is to inform trading aspect of NYC LL97 of 2019: <https://www.urbangreencouncil.org/content/news/new-way-tackle-climate-change-global-peer-cities>

5. Data and Databases

a. CBECS

- i. 2018 CBECS is in the field and two months into data collection. Offering web option this time, which seems to be a hit so far. If you have heard of any buildings being selected, please encourage them to respond.
- b. RECS
 - i. About to kickoff a series of stakeholder outreach meetings in advance of the 2020 RECS. First event is an informational webinar on July 11, 2019.
 - ii. 2020 RECS will feature an expanded sample, which will allow EIA to produce estimated for at least 20 states and possibly more.
 - iii. EIA is exploring alternative methods to collect square footage data. EIA is unlikely to have trained field interviewers to physically measure homes for the 2020 RECS, so exploring alternative options.

6. Benchmarking Tools

- a. ENERGY STAR
 - i. Updated ENERGY STAR models went through a review period during Fall 2018 and Spring 2019 based on stakeholder feedback; certifications were temporarily suspended during review period.
 - ii. In May 2019 review period complete for K-12 school, hotel, warehouse, and worship facility models. Models have been re-released and certification is now open for these building types. Technical details for the model analysis and review are available in reports:
<https://www.energystar.gov/buildings/facility-owners-managers/existing-buildings/use-portfolio-manager/update-energy-star-scores-cbecs>
 - iii. Office and retail/supermarket models still under review; anticipate re-release of these models in July 2019.
- b. Other tools
 - i. Building EQ
 - ii. DOE Asset Score

7. ASHRAE Sessions of Interest

Sunday, June 23, 8:00 AM – 9:00 AM Debate 1
Site vs. Source Energy: Which Metric Should Be Used?

Sunday, June 23, 8:00 AM – 9:00 AM Seminar 2
Net-Zero Hospital Guidebook (ASHRAE/REHVA)

Sunday, June 23, 11:00 AM – 12:30 PM Seminar 14
Understanding the 2018 ENERGY STAR Score Updates

Monday, June 24, 8:00 AM – 9:30 AM Seminar 26
The Process for Zero Energy Office Buildings: The Next ASHRAE Advanced Energy Design Guide

Tuesday, June 25, 8:00 AM – 9:30 AM Seminar 38
Building Energy Efficiency at the System Level

Tuesday, June 25, 9:45 AM – 10:45 AM Workshop 3
Targeting What? Best Practices for Setting Performance Goals