

AGENDA
TC 7.6 Building Energy Performance
Monitoring and Energy Performance Subcommittee
2025 ASHRAE Winter Conference, Orlando, FL
Monday, February 10, 2025, 3:00 – 4:30 pm EST

Meeting Sign-In: <https://forms.gle/YGck3VR1p4PCzBzQ9>

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

- a. Potential renaming of subcommittee (within broader TC 7.6 reorganization effort)

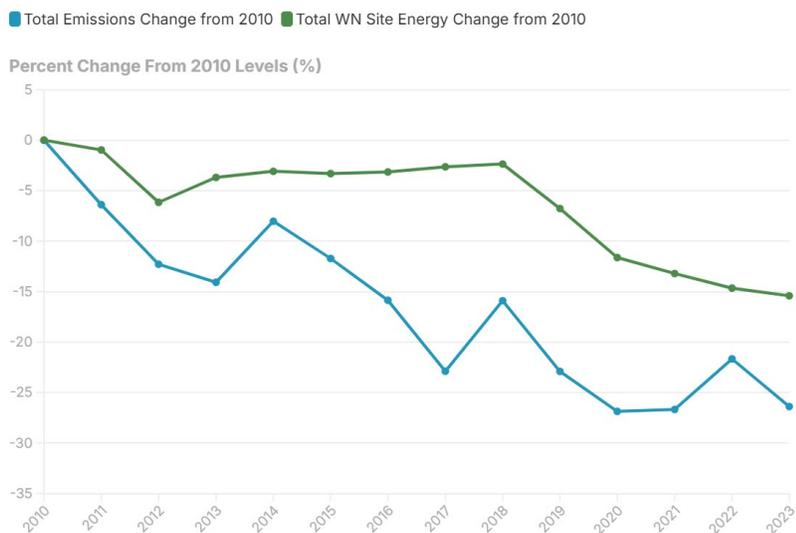
2. Programs and Research

- a. Chair’s emphasis on developing programs and courses (and RTARs)
- b. Recap of Forum 1: Is Building Performance Standard Legislation a Pathway to Decarbonization?
- c. New ideas

3. Governmental Policy

- a. Municipal
 - i. Recent [analysis from Urban Green Council](#) shows that:
 - 1. 92% of all buildings meet the 2024 LL97 limits
 - 2. 43% of all buildings meet the 2030 LL97 limits
 - 3. Site energy use in NYC buildings over 25,000 ft² dropped for the fifth consecutive year

Benchmarked Emissions and Energy Trends, 2010–2023



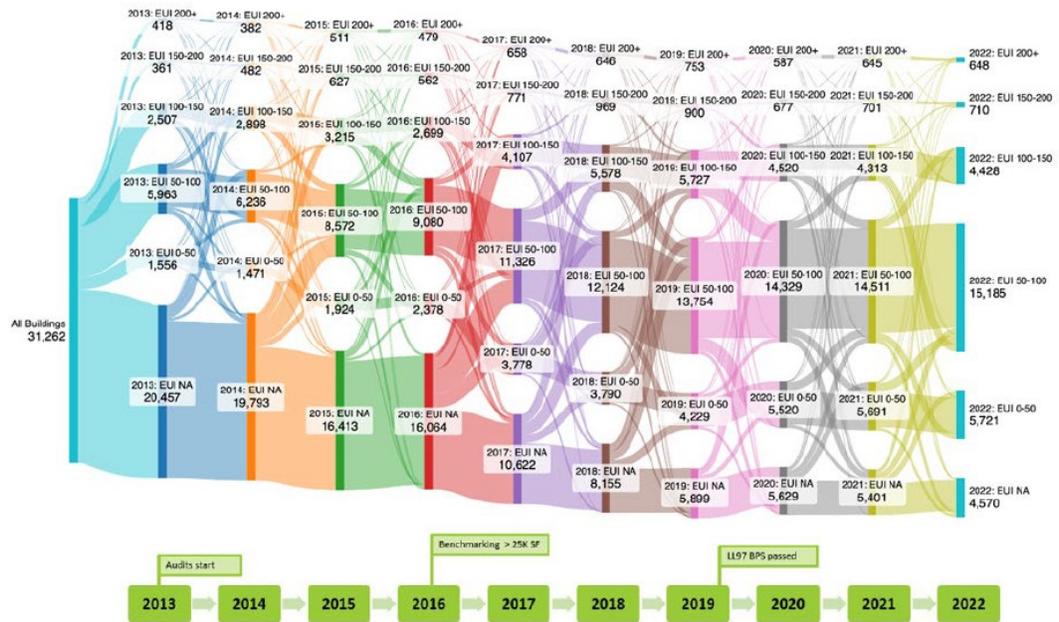
Data: LL84 2010-2023 filtered for properties that regularly submitted data across thirteen years; N = 2,515 • WN = Weather Normalized

- ii. IMT’s recent analysis of [BPS in the first compliance cycle](#) shows that 30-80% of buildings are on track to meet their first BPS target, depending on the jurisdiction

Table 2. Initial Progress based on percentage of all covered buildings meeting standards

Location	Washington, DC	New York City, NY	St. Louis, MO	Boston, MA	Denver, CO
Percentile for target setting	50 th each cycle	~75 th initially ~25 th by 2030	65 th each cycle	~75 th initially ~25 th by 2030	15 th by 2030
Percentile selected via	Statute	Modeling	Statute	Modeling	Statute + Modeling
% Meeting first standards when set	50%	75%	35%	54%	15%
% That meet first standard in latest data	53%	80%	30%	76%	36%
% Meeting 2030 standards when set	N/A	13%	N/A	24%	15%
% That meet 2030 standard in latest data	N/A	24%	N/A	25%	24%

- iii. CUNY Building Performance Lab recently completed an analysis [Data Driven Commercial Building Energy Code Compliance and Technology Inventory for New York City](#). Check out the Sankey diagram of EUIs over time below.



- iv. In 2024 [Bedford, NY](#) passed a benchmarking and disclosure ordinance for residential rental property containing 2 or more residential units.
 - v. In February 2025 Boston, MA approved an [amendment to the city’s zoning code](#) that requires new buildings over 20,000 ft² to have net-zero carbon emissions
- b. State
- i. In September 2024 California [Gov. Newsom vetoed Assembly Bill 2513](#) that would have required all gas stoves sold in CA to display a warning label about the health risks associated with pollutants emitted from gas stoves.

- ii. In November 2024 Berkeley, CA residents [voted overwhelmingly against](#) a natural gas tax. Measure GG would have imposed a special tax of \$2.96/ccf on buildings over 15,000 ft² that use natural gas.
 - 1. The ballot measure was [Berkeley’s response](#) to the Ninth Circuit striking down it’s natural gas ban.
 - iii. In November 2024 Washington State voters [approved a measure that protects access to natural gas](#) in WA and ensures that local governments and the state’s energy code cannot “prohibit, penalize or discourage the use of gas.”
 - iv. In January 2025 a lawsuit was filed [challenging Maryland’s BPS](#). Lawsuit alleges that federal government has the power to regulate efficiency standards for appliances, not states.
- c. U.S. Federal
 - i. A [recent executive order](#) withdrew the U.S. from the Paris climate agreement
 - d. International
 - i. In response to the threat of U.S. tariffs, the Ontario premier has [threatened to cut off](#) Canadian energy exports to the U.S.
 - e. Other Trends
 - i. Data centers electricity demand has tripled over the past decade; data centers are projected to account for as much as [12 percent of the country’s](#) electricity consumption by 2028.
 - 1. Check out the full [LBNL report](#).(key image below)

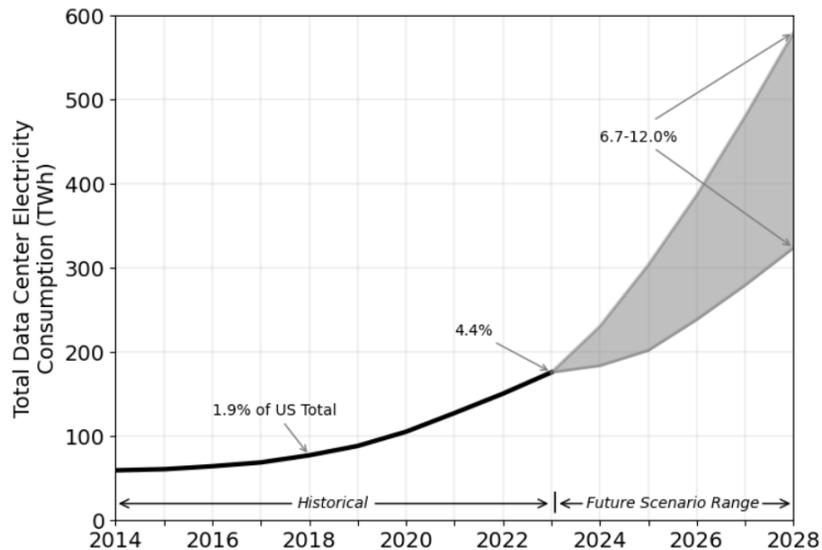
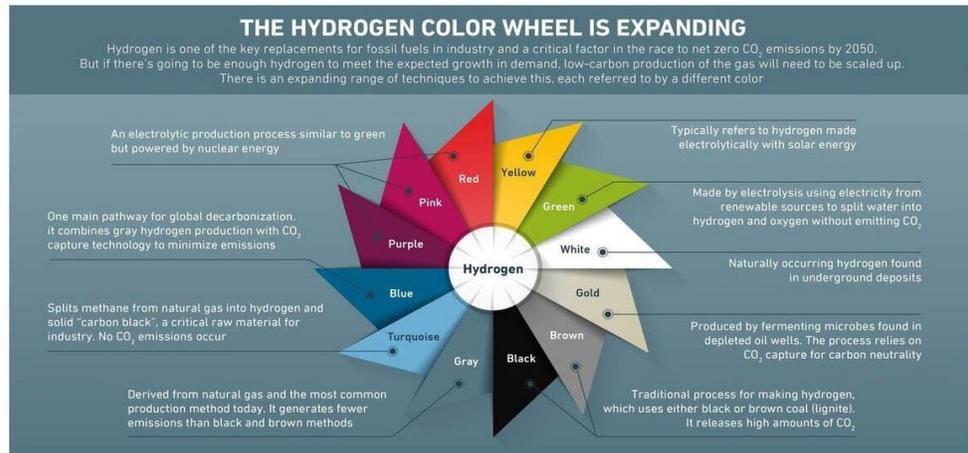


Figure ES-1. Total U.S. data center electricity use from 2014 through 2028.

- 2. Time capsule from May 2021: [2018 CBECS Data Center Pilot](#) discusses data center data collection challenges
 - 3. Data centers looking at next gen nuclear power—see [TerraPower nuclear startup](#) by Bill Gates—and seeking “[behind the meter](#)” connections directly to power plant
- ii. Hydrogen as a key replacement for fossil fuels in decarbonizing. The hydrogen color wheel (and another [explainer from National Grid](#)):



4. Data and Databases

a. CBECS

- i. CBECS releases [exploratory survey results](#) about changes to office buildings following the COVID-19 pandemic. Key finding: education buildings upgraded air filtration systems and installed portable air cleaners, compared to all other building types.

b. RECS

c. DOE Building Performance Database (BPD)

d. EPA's Whole-Building Energy Data Campaign

- i. U.S. EPA's [Expanding Access to Whole-Building Energy Data](#) has progressed.
 1. Identified utility markets with greatest unmet need for whole-building utility data
 2. Compiled stakeholder feedback on the importance of whole-building utility data
 3. Assembled resources, including this [illustrated 2-pager](#)

5. Benchmarking Tools

a. ENERGY STAR

- i. [ENERGY STAR Next Gen certification](#) has launched. Applications start February 24, 2025. To qualify, commercial and residential buildings must:
 1. Achieve an ENERGY STAR score of 75 or higher
 2. Meet a direct GHGI emissions target
 3. Obtain at least 30% of the total energy it consumed from on-site and/or off-site renewables

b. Other tools

- i. Building EQ
- ii. DOE Asset Score

6. 2025 ASHRAE Winter Conference Sessions of Interest

*Sponsored or co-sponsored by TC 7.6

***Forum 1: Is Building Performance Standard Legislation a Pathway to Decarbonization?**

February 9, 2025, 9:45 AM EST

***Workshop 1: Energy-Efficient Buildings Connection to Integrated Power and Thermal Grids to Achieve Decarbonization Goals: Part 1**
February 9, 2025, 9:45 AM EST

***Workshop 2: Energy-Efficient Buildings Connection to Integrated Power and Thermal Grids to Achieve Decarbonization Goals: Part 2**
February 9, 2025, 11:00 AM EST

*** Seminar 18: The True Value of Building Performance**
February 9, 2025, 1:30 PM EST

Seminar 22: Developing a Carbon-Free Future Depends on Opening the Door to the Past: Existing Buildings Hold the Key
February 10, 2025, 8:00 AM EST

Paper Session 33: Expanding Retrofit Strategies
February 12, 2025, 9:45 AM EST

Seminar 53: Building Decarbonization: Policy Goals, Performance Standards and Pathways for Optimizing Both Climate and Health
February 12, 2025, 9:45 AM EST