REACH CODE NEWS BRIEF: DECEMBER 2023

2023 YEAR IN REVIEW: CHANGES IN THE REACH CODES LANDSCAPE AND NEW OPPORTUNITIES

It was a momentous year for local jurisdictions in California, and for the Statewide Reach Codes team. From a promising beginning, with communities adopting new reach codes focusing on existing buildings and flexible path approaches, the landscape changed dramatically in April with the **CRA v. Berkeley** ruling from the Ninth Circuit Court of Appeals. Many jurisdictions chose to pause their reach code efforts, whether still in the development stage or in the implementation stage. Others explored ways to move forward while minimizing risk.

Here's a brief recap of noteworthy developments from our News Brief issues this year!

New Reach Code Adoptions:

City of Encinitas

The reach code package, approved by the California Energy Commission in its January 2023 meeting, mandated one efficiency measure from a menu of options for additions and alterations to existing single family homes or existing multi-family buildings at a specific threshold as well as requiring photovoltaic systems for additions to existing nonresidential, high rise residential, mixed-use and hotel/motel buildings.

City of Piedmont

The reach code package, also approved by the Commission in January, mandated efficiency measures for alterations and additions to single family homes from a menu of options depending on the value of the alteration/addition, as well as a photovoltaic system if the alteration/addition adds an upper level or increases the building's roof area by 30 percent.

City of Cotati

The community adopted the new CALGreen Intervening Cycle Tier 1 EV charging requirements to provide the earliest point of adoption, more than a year before the state required the code update. The ordinance was adopted in late June with an effective date of July 27, 2023.

The Statewide Program maintains an interactive map as well as a comprehensive list of reach code adoptions.

Intervening Code Cycle: 2024 CALGreen Updates (effective date July 1, 2024)

- Updated EV Charging Requirements: Increased requirements for multifamily, hotel and motel buildings, added new requirements (minimum of one EV space for small nonresidential projects, nonresidential additions and alterations), expands occupancies subject to medium- and heavy-duty off-street parking requirements and more
- Alternative Water Demand Calculation Methodology: Updated rules to allow alternative methodology for calculating water demand in new single family and multifamily buildings with resultant construction cost savings and operational cost savings over the life of the building
- Embodied Carbon: Added new provisions to reduce embodied carbon emissions in commercial buildings over 100,000 sq feet and school projects over 50,000 sq ft in both adaptive reuse and new construction projects.

Statewide Reach Codes Team highlights

- Several new reports: the 2022 Cost-Effectiveness Study for Multi-Family New Construction, a report on Appendix M (alternative water demand calculation methodology), a study on All-Electric and Thermal Solar Pool Heating
- Customizable tools and training for jurisdictions implementing reach codes on new construction for the 2022 code cycle
- Updates to the free online Cost-Effectiveness Explorer, including the addition of data sets for nonresidential new construction, subsidy data for existing building policy development, and simplified flexible path approaches
- New model ordinance language for the 2022 code cycle
- Webinars and presentations, including a collaboration with BayREN, Building Decarbonization Coalition, California Climate & Energy Collaborative and 3C-REN on existing building reach code policy development; a CCEC Forum presentation in June, and two recent webinars on the 2023 Updates to the Single Family New Construction Cost-Effectiveness Study and Simplified Flexible Path Policymaking with the Cost-Effectiveness Explorer

Across the reach codes policy development community, participants and stakeholders continue to explore new and innovative ways to maintain momentum and seek new opportunities for achieving jurisdictional and statewide goals. For more information on how the Statewide team can help, visit localenergycodes.com!

UPCOMING EVENTS

January 11: 3C-REN webinar: Introduction to the Energy Code.

January 18: 3C-REN webinar: Using Life Cycle Assessment & Embodied Carbon Calculators to Make Design and Product Choices

January 22-24: Cleantech Forum North America. San Diego

January 24: California Energy Commission Business Meeting

January 27: Planning and Conservation League: 2024 California Environmental Assembly. UC-Davis

January 29-30: Government Energy Summit. Stanford University, California Energy Commission, US DOE. Stanford University.

January 30: DOE Better Buildings Program webinar: [3-2-1 Action: Transforming Climate Plans into Action]

NEW THIS MONTH!

BUILDING PERFORMANCE STANDARDS AND BUILDING ENERGY BENCHMARKING: A PRIMER FOR LOCAL JURISDICTIONS

Existing buildings make up a significant percentage of building stock in most communities. For instance, according to the 2018 CBECS study, more than half of commercial buildings in the US were built between 1960-1999 with only 25% built since 2000.[1] Similar statistics are true of residential building stock; according to the National Association of Home Builders, more than 60% of owner-occupied residences were built before 1990.[2] Many jurisdictions at the local, state and federal levels are exploring approaches to tackle energy use and efficiency in existing buildings.

Two of the most promising approaches are building energy benchmarking and building performance standards. What's the difference, and how can local jurisdictions use these approaches as part of their policy development efforts?

Building Energy Benchmarking at a Glance

Benchmarking is a way to measure the current energy performance of a building against past data or buildings of a similar size and occupancy. In California, the Building Energy Benchmarking Program is the state's program to publicly disclose the energy use of buildings. Effective in 2018, owners of large commercial buildings (more than 50,000 ft^2 of gross floor area) were mandated to report energy use to the California Energy Commission annually. Beginning the following year, owners of multifamily buildings (17 or more residential units and more than 50,000 square feet of gross floor area) were also required to comply annually. Some exemptions apply. A handful of local jurisdictions have adopted benchmarking ordinances that extend the requirements to smaller buildings and are exempted from the state requirements.

Building Performance Standards (BPS) Go Beyond

The BPS approach goes one step further from disclosing energy performance data to mandating a specified performance level against an identified target, which can be an energy, carbon or GHG emissions reduction target. BPS measures are typically paired with benchmarking standards as a means of ensuring compliance. Often, the first step toward BPS implementation is a benchmarking mandate to establish the practices of energy data collection in order to determine what types of BPS targets might be necessary. Generally, building owners have a grace period during which they can conduct the upgrades necessary to bring the buildings into compliance. Benchmarking data is typically tracked in EPA's free online ENERGY STAR Portfolio Manager, and BEAM, Touchstone IQ, SEED, and custom CRM tools are also used by jurisdictions to track performance improvements and compliance to support the BPS.

Table 1 offers a look at some jurisdictions that have adopted mandatory BPS in recent years.

		Localities	
Countries	States	Enacted	Expect enactment in 2023
France	Colorado	Boston, MA	Cambridge, MA
Netherlands	Maryland	Boulder, CO	Portland, OR
United Kingdom	Washington	Chula Vista, CA	Seattle, WA
U.S. federal buildings		Denver, CO	
(EU pending)		Montgomery County, MD	
		New York City	
		Reno, NV	
		St. Louis, MO	
		Tokyo	
		Vancouver, BC	
		Washington, DC	

Table courtesy of ACEEE

In California, benchmarking and BPS efforts are getting a jumpstart from a specific project launching soon. Michael Goodrum, Technical Director for Existing Building Policy with NORESCO, offered an overview of the project, “This three-year project has received DOE funding to work with communities to support development and implementation of BPS with software and other technical tools. We’re working on organizing regional cohorts to advance collaboration among communities to streamline efforts and leverage best practices.” He noted, for instance, that efforts to support Chula Vista’s implementation of its new standards will be leveraged to provide guidance to other communities in southern California who are in the early stages of benchmarking and BPS policy development efforts.

Kathleen Bryan, Associate Director, 2050 Partners agrees. “There are a lot of benefits for jurisdictions from regional collaborations. The implementation of benchmarking standards demands a lot of local staff resources to collect data and maintain accurate ownership records. BPS implementation goes well beyond these requirements. So, every type of collaboration that is possible provides benefits to the local community.”

Goodrum notes, “The federal government has developed a robust set of resources as well as technical support, available on the Building Performance Standards page, which includes a form for requesting technical assistance, a resource library, and information about financing and implementation.”

Both experts agree that there are numerous resources available to local jurisdictions exploring this area (see the Resource listing at the end of this article).

Bryan notes that no jurisdiction is yet in the full implementation stage for BPS standards, so many opportunities remain for identifying best practices for specific jurisdictions and regions.

“We stand ready to assist local jurisdictions in the state who are interested in pursuing these types of standards,” both Goodrum and Bryan conclude. “Opportunities will be available next year to participate in the DOE funded project, and we look forward to talking and possibly working with jurisdictions on these standards.”

To find out more about benchmarking and BPS policy efforts, contact Michael Goodrum or Kathleen Bryan.

Resources

- ACEEE: Mandatory Building Performance Standards: A Key Policy for Achieving Climate Goals
- ASHRAE: Building Performance Standards: A Technical Resource Guide
- DOE: Implementation and Administration of Building Performance Standards Guide
- EPA Toolkit: Benchmarking and Building Performance Standards Policy Toolkit
- EPA White Papers:
    - Understanding and Choosing Metrics for Building Performance Standards
    - EPA Recommended Metrics and Normalization Methods for Use in State and Local Building Performance Standards
- Institute for Market Transformation (IMT): Building Performance Standard Implementation Guide

Endnotes:

[1] 2018 Commercial Buildings Energy Consumption Survey, Preliminary Results. November 2020. US Energy Information Administration. Downloaded 11/16/23 from https://www.eia.gov/consumption/commercial/

[2] https://www.nahb.org/blog/2023/02/aging-housing-stock

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