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CalMTA Comments on 24-BPS-01 California Building Energy Performance Strategy Report

Additional submitted attachment is included below.

June 26, 2024

California Energy Commission
Docket Unit, MS-4
Docket No. 24-BPS-01

Re: Request for Information and Input on the California Building Energy Performance Strategy Report

To whom it may concern:

CalMTA would like to thank the California Energy Commission (CEC) for the opportunity to submit comments in response to the California Building Energy Performance Strategy Report.

We are submitting comments in response to RFI Questions 1-6, 8, and 10-11.

QUESTION 1
Please provide the following information about you and/or your organization:

Question 1.1
Names & email addresses of public contacts for you and your organization.

My name is Rick Dunn, Sr. Manager for Emerging Technology at the CalMTA, which is California's statewide Market Transformation Administrator. Email: rdunn@calmta.org.

Question 1.2:
What are your areas of interest in this report development process?

CalTMA's areas of interest include building energy performance, energy benchmarking and Building Performance Standards (BPS), and the role they play as either barriers or leverage points in market transformation activities.

Question 1.3:
Description of your organization and the constituency you represent.

CalMTA is a program of the California Public Utilities Commission (CPUC) and is administered by Resource Innovations. We develop market transformation initiatives (MTIs) to increase energy efficiency and reduce greenhouse gas emissions by driving market adoption of selected technologies and practices. Potential CalMTA MTIs currently in development that relate to BPS include:

- Commercial replacement and attachment windows (secondary glazing)
- Portable/window heat pumps
- Efficient rooftop units (ERTUs)
- Commercial foodservice water heating systems

Future MTIs will likely be influenced by BPS as well.

Question 1.4:
What is the best way to outreach and engage with your constituency?

The best way to engage with CalMTA and its constituency is by contacting Stacey Hobart, Principal, Stakeholder Engagement & Communications, at shobart@calmta.org.

QUESTION 3
What building specific conditions and circumstances (such as vintage, climate zone, orientation, etc.) should be included in a building performance strategy?

Buildings of all vintages, climate zones, construction styles, and orientations should be included in a building performance strategy.

Vintages: Even newly constructed buildings can perform sub-optimally with respect to energy efficiency and emissions. New equipment can be installed improperly, be improperly commissioned, and rely on default rather than building-specific configurations and settings. Building performance strategies will benefit from inclusion of requirements for energy monitoring and periodic recommissioning. Older buildings (e.g., pre-2000 with single pane glazing) should be prioritized based on energy use intensity (EUI) and emissions performance.

Climate Zones and Orientation: All climate zones and orientations should be included in a building performance strategy. Even in mild climate zones, solar heat gain can significantly increase cooling loads for buildings with single-pane glazing on east-, west- and south-facing orientations. Increasingly common extreme weather events that impact all climate zones are resulting in higher heating and cooling loads.

Consistent with other BPS programs, segmenting buildings by square footage and prioritizing larger buildings should be considered.

QUESTION 4
How should building benchmarking data be used to prioritize building upgrades and incentives?

Incentive dollars will have the greatest impact on reducing EUI and emissions if applied to building upgrades that would not occur in the absence of incentives and/or that need to occur in a particular sequence to optimize energy and emissions benefits.

Many system upgrades (e.g., HVAC, lighting, water heating) have strong a return on investment. These compel building owners to invest as part of a typical building life-cycle management strategy that replaces equipment at end-of-life with more efficient technologies, but without incentives. While incentive dollars can accelerate the adoption of these technologies at higher efficiency levels, many upgrades would occur without incentives. Building envelope upgrades, however, are often overlooked or intentionally bypassed due to capital investment requirements. Also, utility programs rarely include incentives for envelope measures due to low measure cost-effectiveness. Thus, EUI and emission reductions from envelope improvements can be permanently forfeited in favor of less expensive upgrades.

Similarly, incentive dollars will have the greatest impact when applied to upgrades that should *precede* other upgrades in order to maximize the collective efficiency and emissions-reducing effect. Once mechanical systems (HVAC) are upgraded, it is less likely and more challenging to justify subsequent envelope upgrades. "Envelope First" strategies are one example where incentives can amplify the benefit of subsequent mechanical system upgrades.

Benchmarking data can be utilized to identify and prioritize buildings of a certain vintage (e.g., pre-2000) likely to have single-pane glass and high air leakage through the envelope, and likely to have older, inefficient HVAC. Focusing incentives on a combined envelope/HVAC upgrade will have a greater efficiency and emissions impact than addressing these building elements independently.

QUESTION 5

What types of support and resources would be necessary to help building owners meet building performance targets?

Resources that include flexible, market-specific (e.g., schools, commercial real estate, multifamily housing) compliance pathways can be more effective than generic strategies that leave many building-owner needs unaddressed. Constructing a business case for building owners to meet BPS targets can be an effective strategy that is complementary to enforcement strategies. The Rocky Mountain Institute's 'Zero over Time' strategy and NYSERDA's 'Low Carbon MF Retrofit Playbooks' are market-specific and examples of resources that include these success-enabling attributes.

Resources reflecting the special and specific needs of environmental and social justice (ESJ) communities are essential and should include practical funding and financing strategies to minimize the financial impact of compliance.

There is an existing, if fragmented, network of hubs, resources, tools, and guidance aimed at supporting BPS nationwide. California's efforts relating to support and resources would benefit from critically analyzing existing resources, determining which ones can be leveraged for California's efforts, identifying best practices and gaps, and creating new resources only where necessary.

QUESTION 6

What enforcement mechanisms should be considered for both benchmarking and a potential building performance requirement? Which similar programs are known to achieve high compliance rates?

For benchmarking, Seattle has experienced high rates of compliance.[1,2]

Special consideration should be given to BPS enforcement mechanisms and/or more flexible compliance timelines that reflect the greater barriers to and higher relative financial burden of compliance in ESJ communities.

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[1] Ramslie, Dave. Energy benchmarking, reporting, & disclosure in Canada: A guide to a common framework. Canada Green Building Council. April 2016. https://portal.cagbc.org/cagbcdocs/CaGBC_National_Energy_Benchmarking%20_Framework_April_2016.pdf.

[2] Trencher, Gregory & Takagi, Tomoko & Ryuichi, Horie & Sprigings, Zoe. Urban Efficiency: A Global Survey of Building Energy Efficiency Policies in Cities Contents. C40 Cities Climate Group. 2014.

Tenant bill impacts should be taken considered when establishing targets for low-income housing.

Compliance should be enabled more than enforced. Clear pathways to compliance that include harmonized, clear, and streamlined standards, and align with existing building lifecycle management timelines, will ensure market transformation better than enforcement mechanisms.

QUESTION 8
Given the time and location dependance of both the cost and greenhouse gas emissions of electricity, how can building performance strategies be structured to incorporate load flexibility benefits?

Strategies should incentivize building upgrades that improve resiliency, including envelope upgrades that reduce air leakage, improve thermal control, and allow a building to pre-heat, pre-cool, and coast through demand response events for longer periods of time. Strategies should also incentivize adoption of more efficient technologies that incorporate power and/or thermal storage capabilities.

Given the higher energy burden of ESJ communities and the often lower-performing building envelopes in these communities, care should be taken to ensure that performance strategies do not reduce resiliency, as can happen when heat pump space conditioning is installed prior to evaluating envelope performance.

QUESTION 10
For future building performance policies, how can the state manage and minimize administrative costs to the state and local governments while maximizing building performance improvements?

Harmonization of state and local standards, in relation to benchmarking requirements, building characteristics, energy and emissions targets, compliance timelines, enforcement practices, etc. will reduce market confusion and administrative overhead for both the market and enforcement agencies.

QUESTION 11
What considerations or protections should the CEC be aware of to ensure minimal impacts to housing affordability and other potential disruptions for multifamily tenants that may result from a statewide building performance standard?

According to a recent ACEEE report, low-income households spend on average 17.8% of their income on energy alone, almost four times the national average.[3] Given the high electricity rates in California, electrification of low-income multifamily housing in support of BPS is likely to exacerbate this already high burden.

For example, low-income housing is more likely to suffer from poor-performing building envelopes. Another ACEEE report explored electrification best practices and noted that installation of heat pumps without first addressing the building envelope can result in over-

[3] Combined Energy Burdens: Estimating Total Home and Transportation Energy Burdens, ACEEE, May 2024. https://www.aceee.org/sites/default/files/pdfs/combined_energy_burdens_-_estimating_total_home_and_transportation_energy_burdens.pdf

dependence on backup heating/cooling systems and potentially increase peak demand, which will further exacerbate bill impacts.[4]

The CEC should consider mechanisms to ensure that buildings are not only electrified but done so in a way that ensures neutral bill impacts for low-income households. Much work has been done on this issue in New York. While New York is a cold-climate region, many lessons learned are applicable in mild climates. We encourage the CEC to consider lessons learned from electrification of low-income housing in other regions.

We also encourage the CEC to engage ESJ communities in discussion as part of the BPS development process to ensure local context and needs are adequately reflected in BPS policy. To support statewide priorities related to energy equity and ensure that market transformation initiative (MTI) outcomes reflect the needs and desires of the communities they benefit, CalMTA applies an equity lens that includes strategies to align relevant MTIs with existing income-qualified program efforts and to better understand the unique barriers that ESJ communities face – informing intervention strategies that can help overcome those barriers. A series of listening sessions with ESJ community members conducted in November 2023 and June 2024 indicate multiple challenges and opportunities with potential ramifications for this work. For instance, participants noted that the suboptimal conditions of housing stock in ESJ communities, with poor insulation, single-pane windows, and old and/or compromised wiring cited as common, can make it difficult to pursue energy efficiency upgrades; energy assumptions and baselines may also be incorrect due to nonfunctioning equipment.

Listening session participants flagged multiple issues with the historical lack of community input into energy efficiency program design, which should be considered by the CEC.[5] They also stressed the importance of engaging trustworthy partners in program implementation. Multiple participants proposed formalizing the community engagement supporting such efforts through development of committees of residents and CBO partnerships. Several individuals suggested these groups could be regional, and/or stressed the need for regionally diverse representation from the community.

CalMTA appreciates the opportunity to provide feedback on this important report.

Sincerely,

Rick Dunn
Sr. Manager, Emerging Technology
CalMTA

[4] Cohn, C., and N. W. Esram. 2022. Building Electrification: Programs and Best Practices. Washington, DC: American Council for an Energy-Efficient Economy. www.aceee.org/research-report/b2201.Cohn, C., and N. W. Esram. 2022. Building Electrification: Programs and Best Practices. Washington, DC: American Council for an Energy-Efficient Economy. aceee.org/research-report/b2201

[5] https://calmta.org/wp-content/uploads/sites/263/CalMTA-Listening-Session-Summary-Report.pdf