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AHRI Comments â€“ Request for Information and Input on the California Building Energy Performance Strategy Report

Additional submitted attachment is included below.

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June 26, 2024

Gabriel Taylor
California Energy Commission (CEC)
Docket Unit, MS-4
1516 Ninth Street
Sacramento, California 95814-5512

(Submitted electronically to Docket 24-BPS-01)

Re: AHRI Comments – Request for Information and Input on the California Building Energy Performance Strategy Report *[Docket No. 24-BPS-01]*

Dear Mr. Taylor:

The Air-Conditioning, Heating, and Refrigeration Institute (AHRI) respectfully submits this letter in response to the CEC's request for information (RFI) and input on the development of the California Building Energy Performance Strategy Report required by Senate Bill 48 (Becker, Chapter 378, Statutes of 2023) (SB 48), published on the CEC public docket on May 19, 2024.

AHRI represents more than 330 manufacturers of air conditioning, heating, water heating, and refrigeration equipment. It is an internationally recognized advocate for the HVACR industry and certifies the performance of many of the products manufactured by its members. In North America, the annual economic activity resulting from the HVACR industry is more than $211 billion. In the United States alone, AHRI member companies, along with distributors, contractors, and technicians employ more than 704,000 people.

CEC has been charged with the development of the California Building Energy Performance Strategy Report (by Senate Bill 48 (Becker, Chapter 378, Statutes of 2023) (SB 48), which requires the CEC, in consultation with the California Air Resources Board (CARB), the California Public Utilities Commission (CPUC), and the Department of Housing and Community Development (HCD), to "…develop a strategy for using benchmarking data to track and manage the energy usage and emissions of greenhouse gases of covered buildings in order to achieve the state's goals, targets, and standards…"[1] AHRI supports efforts to reduce greenhouse gas (GHG) emissions while promoting sustainable, safe, reliable, and affordable access to the essential air and water heating, and cooling provided by the products manufactured by AHRI members.

[1] California SB48 (2023).

Building performance standards (BPS) must not be implemented in a way that bans fossil-fuel appliances or that requires building owners to install high efficiency appliances to meet levels that CEC may set.

Banning of EPCA-covered products and equipment is prohibited in building codes and standards.

Since 1978, California's Energy Code (Title 24, Part 6) has been the primary pathway for California residential and nonresidential new and existing buildings (i.e., buildings undergoing additions and alterations) to reduce energy consumption. Alterations, any change to a component that is regulated by the Energy Code, including water-heating system, ventilation system, space-conditioning system, indoor, outdoor, and sign lighting, electrical power distribution system, envelope, and any covered process, need to comply with requirements in § 141.0. Alterations to existing nonresidential buildings do not trigger prescriptive requirements for solar PV and energy storage systems.[2] New nonresidential buildings are required to install solar PV systems "intended to offset the annual electrical consumption of a mixed-fuel building such that it will self-utilize about 80 percent of the annual solar PV generation without battery storage, and about 90 percent with battery storage, over a year."[3]

BPS generally require existing buildings to reduce their energy use and/or carbon footprint over time. Like the Energy Code, BPS are regulations that "concern" energy use of the Energy Policy and Conservation Act (EPCA)-covered products and equipment.[4] Under the BPS framework, building owners first measure energy consumption and/or GHG emissions to capture baseline data. The jurisdiction will then set energy and/or GHG emissions-based performance targets the building owner must meet. California must take care that the setting of metrics and performance targets does not ban fossil-fuel appliances or require building owners to install high efficiency appliances. Regarding metrics, a July 2022 BPS White Paper, the U.S. Environmental Protection Agency (EPA) states that, "site EUI always favors electrification, even when delivered with inefficient technology, while source energy and the ENERGY STAR® score favor electrification only when delivered with efficient technology."[5] Regarding performance targets, the mix in electric generation "approaches 100% renewable energy, site and source energy will be very similar."[6] As the grid greens, source EUI functions more like site EUI and favors electric appliances. Simply put, both the metrics and the performance targets that CEC may set will influence whether fossil fuel equipment can continue to be installed by California homes and businesses.

Setting policies that prohibit fossil fuel appliances directly or *indirectly* are preempted by EPCA. EPCA's preemption provisions prohibit states and localities from instituting laws, regulations and building codes which "concern" energy use of EPCA-covered products and

[2] https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/online-resource-center/2022-0
[3] *Ibid.*
[4] *See* 42 USC § 6291 *et al.*
[5] U.S. Environmental Protection Agency. (2022). *Understanding and choosing metrics for building performance standards*. https://www.energystar.gov/sites/default/files/tools/BPS-White_paper_final.pdf
[6] *Ibid.*

equipment.[7] On January 2, 2024, the Ninth Circuit Court of Appeals upheld its April 2023 decision in the *California Restaurant Association v. City of Berkeley* (*Berkeley*) case. The court ruled that building codes that ***concern*** energy use are preempted by EPCA. AHRI requests CEC to consider EPCA preemption provisions and the court's ruling in the *Berkeley* case in discussions around BPS.

1. EPCA Preemption Provision

EPCA gives the U.S. Department of Energy (DOE) the authority to set nationwide energy conservation standards for various types of appliances and equipment. Its goal is to prevent individual states and their subdivisions from creating rules that would affect the energy consumption standards of these appliances, with limited exceptions.

Under EPCA's preemption provision, state and local regulations "concerning" the "energy efficiency" or "energy use" of covered products "shall [not] be effective."[8] Courts have interpreted this preemption provision to be expansive, finding that the term "concerning" suggests Congress intended the provision to have a "broad preemptive purpose."[9]

Congress intended for EPCA to "preempt State law under most circumstances." *Air Conditioning, Heating, & Refrigeration Inst.*, 2008 WL 5586316, at *7; H.R. Rep. 100-11 at 19. "The plain language of the [Act's] preemption statute makes clear that Congress intended the preemption to be broad in scope." *Air Conditioning, Heating, and Refrigeration Inst. v. City of Albuquerque*, 835 F. Supp. 2d 1133, 1136 (D.N.M. 2010). In particular, "the use of the word 'concerning' suggests that Congress intended the preemption provision to be expansive." *Id.* (citation omitted).

EPCA does not require a regulation to prohibit the energy use of covered products to be preempted in all circumstances; it merely must ***concern*** the energy use of covered products.

2. Ninth Circuit Ruling in *Berkeley*

States and their political subdivisions are expressly preempted from setting energy use regulations for products that DOE regulates.[10] Recently, the Ninth Circuit in *Berkeley*, stated "EPCA preempts regulations, including "building code requirements," §6297(f), that relate to "the quantity of [natural gas] directly consumed by" certain consumer appliances at the place where those products are used."[11] In *Berkeley*, the court ruled that EPCA expressly preempts the City of Berkeley's 2019 ordinance banning the installation of natural gas piping

[7] *See* 42 USC § 6297
[8] *See* 42 U.S.C. § 6297(b).
[9] *See id.*; *see also Metro. Life Ins. Co. v. Massachusetts*, 471 U.S. 724, 739 (1985); *Nat'l Elec. Mfrs. Ass'n*, 2017 WL 6558134 at *5.
[10] *Air Conditioning, Heating & Refrigeration Inst. v. City of Albuquerque*, No. 08-633, 2008 WL 5586316, No. 08-633 at *6 (D. N.M. Oct. 3, 2008); *Nat'l Elec. Mfrs. Ass'n v. Calif. Energy Comm'n*, No. 2:17-CV-01625-KJM-AC, 2017 WL 6558134 at *5 (E.D. Ca. Dec. 21, 2017).
[11] *California Restaurant Association v. City of Berkeley* (January 2, 2024).

in newly constructed buildings. In the January 2, 2024, amended opinion, the Ninth Circuit held that "[b]y its plain text and structure, EPCA's preemption provision also encompasses building codes concerning the energy use of covered products."[12]

Further, the court in *Berkeley* stated that "EPCA's preemption provision extends to regulations that address the products themselves *and* building codes that concern their *use* of natural gas. By enacting EPCA, Congress ensured that States and localities could not prevent consumers from using covered products in their homes, kitchens, and business."[13]

The Ninth Circuit concluded that Berkeley's ordinance was a "regulation concerning the … energy use" of a covered product because the plain text and structure of EPCA's preemption provision encompasses building codes that regulate natural gas use by covered products," including eliminating the use of natural gas. "EPCA preemption extends to regulations that address the products themselves and the on-site infrastructure for their use of natural gas."

Berkeley's ruling is the prevailing law of the land in the states and U.S. territories that lie in the Ninth Circuit, including California. As such, any enacted building codes that *concern* the energy use of EPCA-covered products are subject to scrutiny by the decision of that court. As discussed above, site EUI favors electrification and therefore any BPS that limits building owners' choice of EPCA-covered products which meet federal minimum efficiencies, would violate EPCA's preemption provisions. AHRI urges the CEC to ensure the BPS align with the court's decision in *Berkeley* and are not preempted by EPCA.

New Metrics Used for Compliance with Energy Code Cannot Be Used for BPS

AHRI expressed concern regarding the implementation of new metrics for proposed measures and code compliance in Title 24-2025.[14] In the Energy Code, CEC has proposed using a new metric, Long-term System Cost (LSC), to evaluate cost-effectiveness for proposed prescriptive measures and within Title 24's compliance software (Section 10-109), in the performance approach.[15] If adopted, LSC will also be used for code compliance with the performance path. Software, developed by the Energy Code, implements simulation and compliance rules to simulate the energy use of a proposed residential or nonresidential building and compares it to a standard design energy budget to determine if the building complies with the Energy Efficiency Standards. AHRI requests the CEC not to use the Energy Code metrics in development of BPS.

The CEC's 2025 Energy Code Accounting Methodology Report "documents the technical methods and tools used to assess energy efficiency proposals for the 2025 California

[12] *Id.*
[13] *Id.*
[14] AHRI Comments – Title 24-2025 45-day Express Terms. Docket No 24-BSTD-01. TN# 256352. Docketed May 13, 2024. Available at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=24-BSTD-01
[15] Title 24-2025 Pre-rulemaking Express Terms, Section 140.1 – Performance Approach: Energy Budget, (Docket 21-BSTD-01, TN# 252915)

Building Energy Efficiency Standards." [16] However, the report lacks important details on the fundamental approach and assumptions being used to cost justify measures for the Energy Code.

In the Accounting Methodology Report, the CEC acknowledges that cost-effectiveness is defined relative to the *consumer*.[17] California Public Resource § 25402 (c)(1)(A)(i) states that "standards or other cost-effective measures shall be drawn so that they do not result in any added total costs *for consumers over the designed life of the appliances concerned*." However, in the new metrics, the CEC has extended statutory requirement of "life-cycle cost of complying"[18] to a measure period of 30 years.[19] Additionally, LSC is a metric created to determine the dollar value of energy efficiency measures relative to the state, not the consumer. Using a 30-year period of analysis, even if it includes multiple product purchases, distorts life-cycle cost beyond what is intended by the plain language of the authorizing statute. Measures proposed must be analyzed relative to the consumer and over the *design life of the appliance* concerned. In comments, AHRI suggested that the CEC reevaluate the use of metrics, including the proposed LSC, that do not accomplish this simple mandate.

In addition to LSC, the CEC uses the Source Energy metric for energy accounting. The CEC states these two metrics enable it to evaluate hourly system cost and hourly marginal source energy of the 30-year period of analysis.[20] Per the report, the primary purpose in updating the metrics is to better correlate the cost-effectiveness with greenhouse gas impacts. The CEC explains that to establish cost-effectiveness it uses forecast energy demand in California and weather data. Energy demand is created by forecasts of construction floor area by prototype and climate zone. Energy consumption of prototype building models is calculated operating in a climate that has also been forecast over 30-years. EPA notes that while "emissions vary across time, there is no definitive evidence that a time of use emissions metric would significantly impact emissions reductions."[21]

For the Energy Code proposal, CEC used "eight percent annual growth rate for residential gas price models to forecast future residential gas retail rates," but it does not address residential electric retail rate forecasting.[22] In a recent California Public Utility Commission (CPUC) report, "the average annual rate increases between the first quarter of 2023 and fourth quarter of 2026: [Pacific Gas and Electric] PG&E 10.4 percent, [Southern California Edison] SCE 6.0 percent, and [San Diego Gas & Electric] SDG&E 10.4 percent."[23] Additionally, CPUC

[16] TN Number: 255318-1: 2025 Energy Code Accounting Methodology Report
[17] California Public Resources Code 25000, § 25402 (b)(3)
[18] *Ibid.*
[19] Per the 2025 Energy Code Accounting Methodology Report, "measures are assessed over the economic life (also called "period of analysis") of 30 years, and that both the benefits and the costs are assessed incrementally — meaning in comparison to the latest adopted version of the Energy Code. Measures considered for the 2025 Energy Code are analyzed in comparison to the minimum requirements in the 2022 Energy Code."
[20] TN Number: 255318-1: 2025 Energy Code Accounting Methodology Report (pg.10)
[21] EPA (2022). https://www.energystar.gov/sites/default/files/tools/BPS-White_paper_final.pdf
[22] TN Number: 255318-1: 2025 Energy Code Accounting Methodology Report (pg.10)
[23] Sieren-Smith, B., Jain, A., Phillips, P. S., Velasquez, C., La Cour, E., Spencer, J., Zanjani, N., Love Asiedu-Akrofi, Christopher Arroyo, Amardeep Assar, Adam Banasiak, Gelila Berhane, Kristina Boyaci, Jack Chang, Franz Cheng, Jordan Christenson, Emily Clayton, Michael Conklin, Julia Ende, . . . David Zizmor. (n.d.). *2023 SENATE BILL 695 REPORT*. https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/electric-costs/sb-695-reports/2023-sb-695-report_final.pdf

states that "by 2026, bundled [residential average rates] RARs are forecast to be approximately 65 percent (PG&E), 30 percent (SCE), and 100 percent (SDG&E) higher than they would have been if rates for each IOU had grown at the rate of inflation since 2013."[24] AHRI raised questions regarding the electric price models used in the analysis as well as regarding forecasting for electric rates.[25] AHRI continues to pose these questions as they will also be applicable to metrics used for BPS.

LSC appears to modify the hourly source energy (HSE), and likewise, AHRI expects LSC to be forecasted differently for electricity, gas, and propane consumption, based on planned changes for each fuel.[26] Despite requests from AHRI, details on this analysis have not been made public.

Time Dependent Valuation (TDV) is used in Title 24-2022, for comparing proposed building design to their energy budget when using the performance compliance approach. TDV is based on the concept that the energy impacts of a building energy feature should be valued when energy is consumed and has been described by CEC as being, reflective of the "actual cost of energy to consumers and to the grid."[27] The CEC has proposed that the 2025 energy code state,

> "The Energy Budget for newly constructed, low-rise residential buildings are expressed in terms of the Long-Term System Cost (LSC) and Source Energy. Additionally for newly constructed single-family buildings, the energy budget includes peak cooling energy. The Energy Budget for additions and alterations are expressed in terms of LSC."[28]

LSC is defined in Section 100.1 of the draft 2025 Express Terms as, "the present value of costs over a 30-year period related to California's energy system." Like HSE, LSC factors are used to convert predicted site energy use to long-term dollar costs to California's energy system. LSC is used in conjunction with "long run marginal source energy of *fossil fuels* following the long-term effects of any associated changes in resource procurement, focusing on the amount of fossil fuels that are combusted in association with demand-side energy consumption."[29] It is unclear why the 2025 Energy Code has proposed only using source energy for fossil fuel, when the CEC has in the past acknowledged that, source energy is the, "total system input energy (in the form of fuel *including both natural gas and electricity*) that is required to serve building loads."[30] AHRI requested the CEC confirm that source energy is being accounted for all energy

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[24] *Ibid.*
[25] AHRI Comments – Title 24-2025 45-day Express Terms. Docket No 24-BSTD-01. TN# 256352. Docketed May 13, 2024. Available at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=24-BSTD-01
[26] Slide 21 from the November 10, 2022 Energy Accounting Workshop (Docket 22-BSTD-01 TN# 248216) provides high-level forecast demand and applies an 8% annual growth cap on forecasted systemwide residential gas costs.
[27] *Ibid.*
[28] 2025 Joint Appendices, Appendix JA3 – Energy Budget, pg. 58
[29] Per section JA3.1.2 of Appendix JA3 – Energy Budget from the draft 2025 Joint Appendices
[30] Slide 8 of CEC Presentation - 2022 Building Standards -Time Dependent Valuation (TDV) & Hourly Source Energy (Docket 21-IEPR-06, TN# 239439)

sources.[31] Any calculation procedure must provide an equitable comparison between products, be technically accurate, and *fully documented*. The docketed reports[32] are insufficient for this purpose, as it does not allow for a complete stakeholder analysis. The changes are so significant, AHRI questioned if the multipliers used in both TDV and LSC to convert lifecycle dollars per unit of energy ($/kWh, $/therm) to code compliance units of kBTU/kWh and kBTU/therm have changed.

In comments,[33] AHRI also questioned how the use of the new Energy Code metrics meet the CEC's statutory requirement that "performance standards shall be promulgated in terms energy consumption per gross square foot of floorspace."[34] Neither TDV nor LSC can be used by the energy code community to establish building energy intensity performance targets or be used to track energy reductions. These metrics cannot be tracked, measured, or reported. Therefore, the proposed Energy Code metrics do not support building performance standards.

AHRI Response to RFI Questions

Building Benchmarking and Performance:

2. What building performance metrics (such as site energy use intensity, carbon dioxide equivalent emissions, or peak electric demand) should be considered in a building performance strategy? What building performance metrics could be used to trigger building-level interventions (such as enforcement, incentives, etc.)?

   AHRI Response: In the 2022 White Paper,[35] EPA provides an excellent detailed description of metrics that jurisdictions could consider for BPS in the following categories:

   - Metrics for Energy Efficiency, including site energy use intensity (EUI) and variations and source EUI and variations
   - Metrics for Electrification
   - Metrics for Renewable Electricity
   - Metrics for Greenhouse Gas Emissions
   - Metrics for Related to Grid-Balancing
   - Combined Metrics and Net-Zero Considerations

   EPA explains the implications associated with each metric and evaluation criteria CEC can consider as it generates the report. AHRI calls attention to the tension between EPA's

[31] AHRI Comments – Title 24-2025 45-day Express Terms. Docket No 24-BSTD-01. TN# 256352. Docketed May 13, 2024. Available at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=24-BSTD-01
[32] 2025 Energy Code Accounting Methodology Report. Docket 24-BSTD-01, TN255318-1. 2025 Multifamily Individual Heat Pump Water Heater Baseline Report. Docket 24-BSTD-01, TN255318-2. 2025 Nonresidential HVAC Heat Pump Baseline Report. Docket 24-BSTD-01, TN255318-3. 2025 Single-Family Two Heat Pump Baseline Report. Docket 24-BSTD-01, TN255318-5.
[33] AHRI Comments – Title 24-2025 45-day Express Terms. Docket No 24-BSTD-01. TN# 256352. Docketed May 13, 2024. Available at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=24-BSTD-01
[34] California Public Resources Code 25000, § 25402 (b)(1)
[35] U.S. Environmental Protection Agency. (2022). *Understanding and choosing metrics for building performance standards*. (p.18) https://www.energystar.gov/sites/default/files/tools/BPS-White_paper_final.pdf

suggested goal of focusing on actions directly within the building owner's control and AHRI's flag of potential legal challenges. Non-normalized[36] site EUI is the only metric fully within control of the building owner and is not subject to change over time. Site energy is intended to represent the energy consumed at the building and reflected on the energy bill. However, "site EUI always favors electrification, even when delivered with inefficient technology, while source energy and the ENERGY STAR score favor electrification only when delivered with efficient technology."[37] A metric that always favors electrification may put California at odds with the Ninth Circuit's decision in *Berkeley*. As discussed above, Source EUI metrics, which put different forms of energy used by buildings on the same scale, favor electrification only when the most efficient technology is used. AHRI supports BPS metrics that are fuel agnostic and allow for equitable comparisons among buildings with different fuel mixes.

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

   AHRI Response: Most, if not all, state and local BPS start with larger privately-owned buildings (>50,000 sf) and phase in smaller buildings over time. Consistent with other jurisdictions, smaller government owned and operated buildings could be included in the first stage of BPS. As CEC is aware, owners of commercial buildings with more than 50,000 square feet of gross floor area and the owners of multifamily residential buildings with more than 50,000 square feet of gross floor area and 17 or more utility accounts are required to report energy usage and building characteristic information annually to the state.[38] AHRI recommends CEC likewise start with larger privately-owned buildings and government owned and operated buildings.

   AHRI recommends CEC pay close attention to and potentially consider compliance deadline extension for low- and moderate-income (LMI) multi-family buildings to ensure financing and technology options in place prior to compliance. In Washington D.C., the DC Sustainable Energy Utility (DCSEU), in partnership with the District Department of Energy & Environment (DOEE) and the DC Green Bank, offers enhanced technical and financial assistance to owners and managers of qualifying affordable multifamily buildings that do not meet D.C.'s Building Energy Performance Standard through the District's Affordable Housing Retrofit Accelerator.[39]

   CEC should consider excluding on-site fuel combustion for emergency generation.

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

[36] Site EUI can be normalized for weather and/or business characteristics
[37] U.S. Environmental Protection Agency. (2022). *Understanding and choosing metrics for building performance standards*. https://www.energystar.gov/sites/default/files/tools/BPS-White_paper_final.pdf
[38] California Public Resources Code (PRC) section 25402.10 authorizes the Building Energy Benchmarking Program
[39] https://www.dcseu.com/retrofitaccelerator

AHRI Response: AHRI supports maintaining flexibility for building owner compliance with BPS. However, a database of suggested energy efficiency measures or prescriptive options (or packages) that building owners could adopt may be helpful. AHRI recommends CEC review Appendix E of ASHRAE 100[40] for suggested packages for building upgrades.

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

   AHRI Response: The DCSEU Affordable Housing Retrofit Accelerator offers key support and resources for low to moderate income (LMI) multifamily buildings, including: training on building energy performance standards (BEPS) and the compliance pathways; an ASHRAE Level II audit of the building and audit report, a value of at least $17,500, provided by the DCSEU at no cost; assistance with understanding and choosing the proper BEPS Compliance Pathway; meetings with DCSEU Account Managers and Engineers to assess the opportunities in your building; access to direct financial and contractor support and enhanced incentives from the DCSEU and other programs to make energy efficiency upgrades; and access to financing opportunities from the DC Green Bank.[41] These resources should be available to all building owners should CEC pursue BPS.

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?

   AHRI Response: AHRI has no comments at this time.

7. What other steps can the CEC take to help building owners comply with existing building benchmarking requirements?

   AHRI Response: AHRI has no comments at this time.

Load Flexibility and Resiliency:

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?

   AHRI Response: EPA (2021) discusses challenges with achieving grid-balancing with BPS policies and outlines key considerations for peak demand metrics.[42] An additional consideration for CEC is that if building performance strategies are to be structured to incorporate load flexibility benefits in buildings, such strategies should complement, not

[40] ANSI/ASHRAE/IES Standard 100, *Energy and Emissions Building Performance Standard for Existing Buildings*,
[41] https://www.dcseu.com/retrofitaccelerator
[42] U.S. Environmental Protection Agency. (2022). *Understanding and choosing metrics for building performance standards*. (p.18) https://www.energystar.gov/sites/default/files/tools/BPS-White_paper_final.pdf

contradict, the CEC's Flexible Demand Appliance Standards being developed per Senate Bill 49.[43] CEC requirements for Pool Controls (23-FDAS-01) will be effective on September 29, 2025.[44] CEC identified additional appliances for flexible demand, including air-conditioners, heat pumps, and water heater heaters.[45]

Cost Effectiveness:

9. How should measure cost effectiveness be incorporated into building performance strategies or requirements? How should cost effectiveness be determined?

   AHRI Response: AHRI strongly supports cost effectiveness being incorporated and being defined relative to the *consumer*. The first cost of compliance in meeting targets should be of the upmost importance. Building owners, particularly low-income or marginalized communities, likely have not budgeted for the cost associated with BPS. The upgrades required to meet thresholds can be significant and may force the replacement of equipment long before expected retirement. Infrastructure upgrades, such as the building's electrical system, may also require modification to support meeting BPS thresholds. These factors should be included. AHRI also recommends the cost of fuel switching be considered, along with the cost of energy during operation.

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?

    AHRI Response: DOE has recently published a document outlining mitigating risks during the implementation of BPS, including administrative costs. AHRI recommends CEC staff review the document, available here: https://www.energycodes.gov/sites/default/files/bps/2024-05/Risk_Mitigation_Guide_BPS.pdf

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?

    AHRI Response: AHRI strongly suggests that CEC avoid setting a carbon tax associated with BPS compliance. If a carbon tax's impact is regressive, it will disproportionately

[43] Skinner, Chapter 697, Statues of 2019
[44] CEC Notice of Approval of the Regulatory Action by the Office of Administrative Law. Docket 23-FDAS-01. TN# 254739. Docketed on February 29, 2024. Available at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=23-FDAS-01
[45] Steffensen, Sean. 2020. Introduction to Flexible Demand Appliance Standards. California Energy Commission. Publication Number: CEC-400-2020-013. Available at:

affect disadvantaged communities.[46] Even progressive carbon taxes may adversely impact lower income consumers by increasing the price of goods and services.[47]

Other Comments, Issues, and References:

12. Please submit any additional comments, issues, references, models, recommendations, or other information that you believe is relevant to the development of the California Building Energy Performance Strategy Report.

    AHRI Response: AHRI has no comments at this time.

CONCLUSION

Modernizing existing building stock by increasing energy efficiency measures has the potential to lower energy consumption. However, there is no guarantee that reduced energy consumption will translate to lower energy bills for consumers. California has some of the nation's highest priced electricity, which have increased six times as fast as the U.S. average between 2011 and 2019.[48] Researchers have also found that the "average California home uses about half as much energy as an average American household" and have questioned if carbon reduction building policies are disproportionately affecting lower- and middle-income families, exacerbating the state's already high poverty rate.[49] Striking a balance between effective emissions reduction and equitable cost distribution is critical as CEC navigates the complexities of implementing and enforcing BPS. CEC must also take care that the metrics and performance targets, if set, do not have the unintended consequence of triggering federal preemption concerns.[50]

[46] *What are the advantages and challenges of a carbon tax?* (2022, February 4). World Economic Forum. https://www.weforum.org/agenda/2022/02/what-a-carbon-tax-can-do-and-why-it-cannot-do-it-all/
[47] *Ibid.*
[48] Bryce, R. (2021, December 15). The high cost of California electricity is increasing poverty. *Medium*. https://freopp.org/the-high-cost-of-california-electricity-is-increasing-poverty-d7bc4021b705
[49] *Ibid.*
[50] Virtually every jurisdiction that has adopted BPS is now engaged in a legal battle. Colorado's policy is being challenged based on preemption by the federal Energy Policy and Conservation Act (EPCA) per Kaplow (2024). Kaplow, S. (2024, May 5). *Does federal EPCA trump Colorado Building Energy Performance Standards (BEPS)? | Green Building Law Update*. Green Building Law Update. https://www.greenbuildinglawupdate.com/2024/05/articles/energy/does-federal-epca-trump-colorado-building-energy-performance-standards-beps/

AHRI appreciates the opportunity to provide these comments. If you have any questions regarding this submission, please do not hesitate to contact me.

Sincerely,

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