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TRC Response to CEC Building Energy Performance Strategy Report RFI

Additional submitted attachment is included below.

CEC BPS Benchmarking RFI

Response due to CEC by 5:00 p.m. on Wednesday, June 26
Source website: California Building Energy Performance Strategy Report

1. Please provide the following information about you and/or your organization:
   1.1. Names & email addresses of public contacts for you and your organization.
   Farhad Farahmand ffarahmand@trccompanies.com
   Tim Mensalvas tmensalvas@trccompanies.com
   Cathy Chappell cchappell@trcompanies.com
   1.2. What are your areas of interest in this report development process?
   Codes and standards,
   Large multifamily and commercial decarbonization,
   Equity
   1.3. Description of your organization and the constituency you represent.
   TRC is an environmental consulting firm with 40 years of expertise in codes and standards development and utility program implementation. In addition, TRC provides expert research, data analytics, engineering, and evaluation support to utilities, governments, and community-based organizations.

   1.4. What is the best way to outreach and engage with your constituency?
   Contact people under 1.1 and we will organize a group meeting.

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.)?

Performance metrics that align with current and upcoming related state and regional agency policies should be prioritized. Air quality metrics being used for CARB, BAAQMD, and SCAQMD for zero emission appliance standards could help ease confusion and support market adoption. NOx is a criteria pollutant that directly contributes to negative health, environment, and property damage impacts by leading to the development of ozone and particular matter in the atmosphere. California is required to reduce these pollutants under the Federal Clean Air Act, the National Ambient Air Quality Standards (NAAQS), California Ambient Air Quality Standards (CAAQS), and the Clean Air Act. Several metropolitan regions throughout California have air quality that exceeds regulated limits at the federal and state levels ("non-attainment").

If the CEC is not authorized to regulate NOx the next best approach would be to regulate carbon dioxide emissions equivalent, which would capture the global warming potential of NOx as well several other greenhouse gases. The CO2e of a particular fuel type should reflect the portion of carbon-free fuel supplied by the utility to a building. For electricity, CO2 may be measured through the utility's power content label. For gas, the CEC would need to develop an approach to capture the prospected renewable hydrogen that would be injected into the natural gas grid. For all fuels, state agencies like the California Public Utilities Commission can enforce utility compliance with long-term carbon neutrality goals and

Renewable Portfolio Standards. This enforcement should be separated from how local governments, or the state, would need to enforce Building Performance Standards.

Simplifications in policy design and enforcement that leverage preceding regulations will be received most favorably by the general community and improve industry compliance.

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

Ownership type is a critical element that determines the amount of financing and resources available to the building owner. Corporate owners will have more capital, bandwidth, and knowledge than small private ("mom and pop") building owners. Small private landlords should be given extra support on compliance with the ordinance in the most cost-effective manner, such as provisions for free technical assistance, strategic energy management services, and early adopter incentives.

Targets should be based on potential for reductions, and that depends on the specific end uses and devices. For example, industrial, agricultural, and other process loads have higher energy use intensity and emissions use intensity than commercial buildings. They also require custom technical solutions for eliminating emissions, which necessitates more time for analysis of alternatives and the impact on the operating income of the business leveraging the process. Commercial kitchens have large energy loads and potentially equity impacts for small business owners renting space in large buildings, although they have technically feasible solutions in most (if not all) circumstances.

Additional conditions and circumstances that directly impact energy demand and emissions include building occupancy type and district heating or cooling systems. Lastly, whether a building is in financial distress or unoccupied may need to be accounted for, since the building is likely to be non-operational and not a major source of emissions.

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

Benchmarking data helps establish a baseline for the building, a target based on compared to peers, and a means to track progress and identify opportunities for improvements.

The data will help identify the most egregious emitters and help prioritize engagement with those building owners on compliance strategies. Benchmarking data should include equipment characteristics, which will inform the necessary level of investment to convert this equipment to zero-emission. For example, central plants serving a campus will require a larger investment to electrify than rooftop packaged HVAC (Heating, Ventilation, and Air Conditioning) units. Incentives should then be prioritized for affordable housing, multifamily housing,

and small business owners that have complex systems and must invest relatively larger amounts to decarbonize.

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

- Guidance and potentially permitting tools for local jurisdictions on enforcement that simplify and expedite the permitting process
- Building industry technical support (i.e., a help desk) for questions and program referrals
- Free technical support for audits/benchmarking and guidance
- Qualified contractor networks to conduct inspections and installations
- Contractor training/workforce development
- Easy-to-use data submission portals and platforms, like Energy Star Portfolio Manager.
- Equity-focused incentives
- Resources for multifamily buildings that protect tenants, such as stipends for alternative accommodations

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?

- Outreach to building owners that confirm their awareness of the requirements and help them interpret the compliance pathways. Making the data transparent and keeping building owners informed throughout the process is key. Having an arbitration process to evaluate variances to either allow or mitigate should be part of the process.
- Prioritize highest emitters to commit to action by sorting both by individual buildings as well as property owners/portfolio owners.
- Compliance penalties such as fines, though to our knowledge penalties are not levied by many jurisdictions with benchmarking or BPS currently

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

Provide education, resources, and tools to support compliance. General and technical support should be available beyond normal 9-5 hours, allowing small business owners, contractors, etc. to access support outside of their working hours.

The CEC can request Property Assessors' data from all California counties and analyze them to ensure they have attained a relatively comprehensive dataset of buildings, as compared to the data collected by the CEC for buildings subject to the existing benchmarking requirements. Where a building should be reporting but is not, and the building is estimated to be a high emitter, CEC may want to contact the owner by using the Property Assessor data to derive contact information and learn the occupancy status.

The CEC should consider ways to streamline the reporting process by connecting directly with the building's utility providers to collect the energy data so that less reporting is required from the building owner. This could potentially require a lot of resources from the CEC, as data security, cleaning, validation, and possibility anonymity will all be necessary.

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?

The CEC can consider granting alternate compliance approaches, such as leniency on timeline to conduct upgrades or lower GHG reduction goals, for buildings that implement load flexible measures and prove they actively participated in DER programs/events.

Overall, due to complexity and challenges with monitoring for enforcement, the Building Performance Standard should align with utility price signals, but not lead in incentivizing load shift.

- Load flexibility is a key measure to achieve decarbonization, but largely overlaps with BPS to support utility-scale adoption of a fully carbon-neutral energy supply using energy storage and electric vehicle charging and other generation sources. Utilities and the CPUC will need to design programs that leverage load shifting and support achieving California's Renewable Portfolio Standards.
- Similarly, enhanced rate design should drive the market separately to support lower emissions energy generation. The CEC should use fuel cost modeling to ensure that that the BPS does not promote the installation of measures that would conflict with utility or CPUC price signals and increase operational costs on building owners, but this consideration should not be the primary driver when developing BPS performance targets.

Buildings that enable and deliver electric vehicle charging/consumption during periods of high renewable production should ideally receive BPS compliance credit due to offsetting emissions impacts in the transportation sector.

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

Operational cost effectiveness metrics that include societal as well as on-bill factors, like the Long-term System Cost metric that is being used for 2025 Title 24 (Energy Code) should be used. The Building Performance Standard should align with the values of the Energy Code to the extent possible. Where there are limited cost-effective pathways, incentives could be provided to compensate for the gap in funding/costs to drive preferred strategies.

CEC should develop a cost-effectiveness methodology that allows a mechanism for the building owner to demonstrate financial distress. The owners' calculation

methods would need to be prescribed, and either vetted by a third party or be provided by a qualified cost-effectiveness vendor from a vetted list.

Equipment cost calculations should be conducted on a climate zone basis to account for geographical costing factors and climatic impacts on equipment choices (e.g., backup electric resistance).

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?

- Integrate with existing automated and web-based tools to support compliance.
- Support tool development that streamlines permitting processes.
- Like the City of San Jose, phase in requirements for different buildings to level the workflow and reduce peaks and valleys for staff administration. In other words, once the CEC has reviewed and acted on the first phase of compliance documents submitted by buildings, the second phase of buildings will begin submitting their documents for CEC review.
- Group building types that share characteristics (such as equipment type, targets, or compliance status) into cohorts that will receive common resources, such as webinar presentations or other help desk technical support.

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?

- Ensure that renters and tenants are protected by adopting policies that ensure tenants are not displaced, nor that rents are raised significantly due to construction cost pass-throughs. Because the tenant-landlord dynamic is fraught with harassment and litigation, the CEC will need to work closely with other bodies for adequate protections and enforcement:
  - California State Legislature can eliminate the Substantial Remodel loophole in AB1482, which currently allows evictions during substantial remodels rather than requiring relocation assistance. Legislature can also help to cap all rent increases (e.g., to 5% per year), limiting cost pass-throughs.
    - Note that AB1482 is limited in the scope due to the Ellis Act (which allows tenants to be evicted under redevelopment scenarios), as well as the Costa-Hawkins Act (which exempts single family homes and condos built after 1995 from local rent controls). Revising tenant protections holistically is necessary for equitable BPS implementation.
  - California Department of Housing and Community Development may need more resources to uphold AB1482 across the state, rather than

forcing tenants to secure lawyers and defend against non-compliance with AB1482 individually.
    - Enforcement should be coordinated with local agencies who can leverage local infrastructure and knowledge, allowing for responsive and context-sensitive enforcement tailored to the specific needs of each community.
- Provide rebates or cost support for affordable housing and deed-restricted multifamily housing, including bonuses for landlords that actively protect tenants in addition to legislative minimum requirements.
- Provide programs that support emergency equipment replacements (especially heat pump water heaters) to meet longer-term policy goals.

These recommendations address residential tenant protections; however, it is also crucial that small commercial tenants be protected. The CEC must ensure that small commercial tenant protections are included in the proposed BPS, and that small commercial tenants' interests are reflected in the recommendation-design process.

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.

Multiple differing ordinances, programs, metrics, and requirements can become a significant source of confusion and an unnecessary compliance hurdle to be faced by building owners, facility engineers, engineers, and contractors. As much as possible, authorities having jurisdiction should try to align all aspects of these programs to ease confusion, requirements, and level of effort needed to engage and support such an initiative.

Additionally, while SB48 is focused on buildings 50k ft2 or larger, CEC should consider providing model ordinances that enable jurisdictions to reduce this threshold to a larger stock of buildings, such as 20k ft2 or larger, because several of the jurisdictions we work with are considering or already enforcing at this lower threshold.

CEC should try to align the BPS and new construction and existing building energy codes (Title 24 Part 6) so that these buildings are not burdened by high retrofit costs in the future and can easily meet the final goals of the BPS.