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Comment Received From: Jordan Garbayo
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3C-REN Comments on Title 24 Express Terms

Additional submitted attachment is included below.



June 21, 2021

California Energy Commission Docket Office, MS – 4

Re: Docket No. 21-BSTD-01

1516 Ninth Street

Sacramento, CA 95814

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Dear Commissioners and Staff,

The Tri-County Regional Energy Network (3C-REN) is pleased to submit these comments and recommendations as part of the rulemaking process for the 2022 Building Energy Efficiency Standards to the California Energy Commission (CEC). The Tri-County Regional Energy Network (3C-REN) is a collaboration among three California Central Coast counties (San Luis Obispo, Santa Barbara and Ventura) established to deliver energy-saving programs and industry trainings that help reduce energy use, strengthen local job markets, and support efforts to achieve climate goals. 3C-REN's locally-managed energy-saving programs and services are designed to address existing gaps in current programs, and to meet the needs of local government agencies, building professionals, and residents throughout the region. 3C-REN also strives to leverage our programs as a way to re-invest in our community as a whole, support historically underserved communities, and mitigate gaps and disparities caused by social inequality.

After several years' experience and cooperative administration of energy and sustainability programs, the three counties formed the 3C-REN, led by the County of Ventura, to better leverage resources in the delivery of effective programs on a regional level. One of those programs is Energy Code Connect which provides building professionals with forums, trainings, and support services focused on increasing comprehension, compliance, and enforcement of California's energy code. With the needs of the local building industry in mind, 3C-REN supports Express Terms for the 2022 Building Energy Efficiency Standards that:

- Establish prescriptive requirements and update performance baselines for all-electric space and water heating in as many building types and climate zones as is cost-effective;



- Require PV and battery storage for many building types;
- Address energy efficiency opportunities in existing residential and non-residential buildings and for indoor growing/horticulture operations, and;
- Restructure the multifamily energy standards.

3C-REN looks forward to informing the tri-county region of these and other changes once the energy code is adopted.

3C-REN supports the establishment of prescriptive requirements and performance baselines to promote all-electric buildings when cost-effective code for commercial and residential sectors

California Governor Gavin Newsom said it best at a recent wildfire press briefing, “While it's nice to have goals to get to 100% clean energy by 2045, that's inadequate to meet the challenges the state, and I argue this nation, faces.” 3C-REN applauds the CEC for proposing prescriptive requirements and updating performance baselines for cost-effective all-electric space and water heating as a means to accelerate California’s decarbonization goals. 3C-REN is pleased to see the CEC will provide compliance credits as a leverage point to encourage the building industry to incorporate heat pump technologies and other electric measures into their projects.

3C-REN supports the CEC’s proposed Express Terms to require buildings built with gas to be electrification-ready. This would require all potentially installed natural gas appliances and equipment to incorporate an appropriately sized electrical circuit and dedicated slot(s) in the electric panel to power a direct replacement of the gas equipment. Equipment and appliance types would include space heating, domestic hot water, cooking, clothes drying, fireplaces, and others typically installed with natural gas for all residential new construction and nonresidential new construction where applicable.

3C-REN agrees with comments from Mayor Cathy Murillo with the City of Santa Barbara, located in the tri-county region, which express that all-electric homes offer additional health benefits due to the elimination of air pollutants emitted by gas appliances such as carbon monoxide (CO), nitrogen oxides (NOx) including nitrogen dioxide (NO₂), particulate matter (PM), and formaldehyde, which have been linked to various acute and chronic health effects,



including respiratory illness, cardiovascular disease, and premature death.¹ Furthermore, gas appliances pose a greater risk on low-income communities as these air pollutants are most acute for apartments due to a smaller residence size.

3C-REN also agrees with and supports the CEC's efforts to further tighten fossil fuel baselines for new mixed-fuel buildings and support paths to equitable electrification. By adopting more stringent energy efficiency requirements, builders will be discouraged from constructing new mixed-fuel buildings and more likely to utilize the cost-effective all-electric pathway. This will help reduce greenhouse gas (GHG) emissions from the built environment – particularly from gas appliances with a lifespan of 10 – 20 years and help achieve aggressive State and local climate goals. Equally important, the construction of fewer mixed-fuel buildings will help mitigate future stranded natural gas assets and related costs, which will and already do disproportionately burden low-income communities of color. Finally, a tightening of fossil fuel baselines for mixed-fuel buildings will help increase demand and reduce costs of electric appliances, and help alleviate supply chain barriers constraining their rapid adoption in the building industry.

3C-REN supports requiring PV and battery storage for many building types

3C-REN supports the CEC's proposal to require PV and battery storage for the proposed building types. This measure will result in emissions reductions, add to grid flexibility, and be cost-effective for consumers.

3C-REN supports efforts to address energy efficiency opportunities in existing residential and non-residential buildings

After several code update cycles more focused on new construction, 3C-REN supports CEC's efforts to address cost-effective savings opportunities in existing buildings. Enhancing the performance of existing buildings is critical to ensuring residents and businesses in the 3C-REN

¹ Effects of Residential Gas Appliances on Indoor and Outdoor Air Quality and Public Health in California. UCLA Fielding School of Public Health (2020).



territory can upgrade their buildings with cost-effective improvements that simultaneously lower their energy loads and optimize those loads for electrification and decarbonization.

3C-REN supports the CEC's proposed terms to:

- Improve minimum standards for residential kitchen ventilation
- Update and enhance requirements relating to duct sealing and ventilation
- Improve energy efficiency standards for commercial and industrial process loads including, computer room air conditioning, refrigerated areas, fan systems compressed air systems, and steam traps
- Improve nonresidential and multifamily efficiency standards for building envelopes (e.g., exterior walls, windows, roofs, and floors), fan and duct systems HVAC controls, boilers and service water heating systems, indoor and outdoor lighting systems, and grid integration equipment such as demand responsive controls

3C-REN will work through its Home Energy Savings Single Family and Multi-Family Programs, Energy Code Connect Program, and Building Performance Training Program to disseminate information and educate customers, building professionals, and building departments on these code updates and related compliance and enforcement issues. 3C-REN looks forward to coordinating with CEC on these education and outreach opportunities. Anticipating that collaboration, 3C-REN would emphasize the need to support non-residential customers to make upgrades to existing non-residential buildings, as these customers have fewer technical and financial supports to make these improvements to their existing buildings (based on programs offered by 3C-REN and the other Program Administrators operating in the 3C-REN territory).

3C-REN supports efforts to address energy efficiency opportunities for indoor growing/horticulture operations.

3C-REN supports the efforts of the CEC to help the rapid growth of indoor growing and horticulture operations be done so with a focus on cost-effective, energy efficiency that can help balance California's overall energy needs with the economic opportunities these operations provide. 3C-REN understands that the current Express Terms are aligned with this interest and initial comments from parties received during the 2022 pre-rulemaking activities.



As such, 3C-REN supports the proposed 2022 updates to establish new energy efficiency standards for lighting, envelope, and space conditioning systems serving controlled environment horticulture spaces. Updates to lighting requirements will accelerate the adoption of cost-effective LEDs while still allowing for high-performing, high pressure sodium options. The revised approach to the triggers for these requirements in existing buildings represent a more reasonable threshold for building operators to navigate. 3C-REN will support the roll out of these new standards and requirements through its training and education efforts, and will look to coordinate with CEC and local stakeholder groups on this outreach and messaging.

3C-REN supports the restructuring of multifamily energy standards

A common complaint from the local building industry about the energy code is that it's too complex and difficult to enforce. While 3C-REN offers resources and personalized support that address this need, a more effective solution would be to simplify the energy code. 3C-REN supports the proposed restructuring of the multifamily energy code by construction and mechanical equipment instead of the number of habitable stories. We believe this will help improve understanding, interpretation, and access to multifamily energy code requirements; thereby resulting in greater compliance.

3C-REN supports the decision to require Mechanical Acceptance Testing for non-residential projects

3C-REN supports the direction CEC has taken to require mechanical acceptance testing for specific equipment types in non-residential projects. This provides valuable and trained expertise to ensure high performing non-residential buildings while simultaneously helping to create new jobs in the building industry.

3C-REN suggests the CEC consider Certified Energy Analysts (CEA) be required for compliance documentation for all newly constructed residential and nonresidential projects in the next Energy Code cycle

For the upcoming 2025 code update, 3C-REN encourages the CEC to develop requirements that Certified Energy Analysts be responsible for completing required energy models and



compliance forms for appropriate projects. In 3C-REN's experience and from input received from various public and private sector building professionals, CEAs provide comprehensive and complete energy models and compliance documentation for projects. Requiring CEAs, as trusted Energy Code experts, will bring peace of mind for jurisdictional building department staff in knowing that energy calculations are accurate. In addition, this requirement would boost the number of CEAs in the state and energy efficiency compliance for projects. This will usher in a new crop of energy code professionals across the state and create more well-paying and much needed jobs. Lastly, similar to HERS verification on the construction end of a project, CEAs will be involved at the design side to ensure that projects are compliant with the Energy Code early on and are successful from submittal to permit award.

We appreciate the opportunity to provide comment and thank the CEC for carefully considering 3C-REN's response to the request for comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Jordan Garbayo".

Jordan Garbayo
Energy Program Manager, Tri County Regional Energy Network