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| <b>Docket Number:</b>   | 19-BSTD-03   |
| <b>Project Title:</b>   | 2022 Energy Code Pre-Rulemaking  |
| <b>TN #:</b>            | 234206   |
| <b>Document Title:</b>  | SERA Architects Comments - Advocating for All Electric Buildings in the 2022 Standards |
| <b>Description:</b>     | N/A  |
| <b>Filer:</b>           | System   |
| <b>Organization:</b>    | SERA Architects  |
| <b>Submitter Role:</b>  | Public   |
| <b>Submission Date:</b> | 8/3/2020 4:19:20 PM  |
| <b>Docketed Date:</b>   | 8/3/2020   |

*Comment Received From: SERA Architects  
Submitted On: 8/3/2020  
Docket Number: 19-BSTD-03*

**Advocating for All Electric Buildings in the 2022 Standards**

*Additional submitted attachment is included below.*

August 3, 2020

California Energy Commission  
Docket Office, MS4  
1516 Ninth Street, MS-4  
Sacramento, CA 95814-5512

**Re: Call for an All Electric Energy Code in the 2022 Building Energy Efficiency Standards  
(Docket No 19-BSTD-03)**

Dear Commissioners and Staff:

As Architects, Urban Planners and Designers at SERA Architects, we appreciate the opportunity to comment on the California Energy (CEC) 2022 Building Energy Efficiency Standards. The research is in, the time to act is now. It is your obligation to protect the people of California and to continue to provide critical environmental leadership for the United States and beyond. In designing its building efficiency standards for new construction, we strongly advocate that the CEC should safeguard the public health of California's by adopting an all-electric energy code in the 2022 cycle.

We advocate for an exponential acceleration of the "decarbonization" of buildings. Aligned with this resolution, we support required electrification of new construction for the 2022 Title 24 currently in development, as the most effective means to decarbonization. We believe that the move toward electrification is quickly becoming mainstream in our industry, as evidenced by the dozens of California cities which have approved electrification reach codes.

We appreciate that the California Energy Commission is mandated to minimize the cost of energy services to Californians. We believe that for virtually all commercial and institutional buildings today in California, required electrification is consistent with that mandate, since numerous CEC-commissioned studies have found that electrification is the lowest cost and least risky pathway to achieving the State's legislated climate goals by 2045. We believe that the necessary transition to this path must begin with the 2022 update to Title 24. Failure to make this course correction early would result in a continuation of the installation of equipment and infrastructure that will quickly become obsolete and therefore have to be replaced before its end of life; this would waste taxpayer money and thus be contrary to the cost effectiveness requirements of the Warren-Alquist Act. Future renovation and replacement costs must be included in cost effectiveness analysis when considering continued onsite combustion in buildings. While we recognize that there are some very limited circumstances where 100% electrification may not currently be feasible, we believe that the T24 standard can be written to provide the flexibility to address these situations while keeping the vast majority of new construction all electric.

Delaying electrification until the 2025 code cycle would leave less than 20 years to retrofit millions of existing buildings across California by the 2045 deadline. Retrofits are inherently more costly, time consuming, and disruptive to owners and tenants than if buildings were electrified from the start. For example, the Governor has set a goal of building 3.5 million new housing units by 2025. These should be

built for full electrification right from the start rather than passing electrification retrofit costs on to future Californians.

The health, safety, and equity issues of fuel combustion in buildings are also a serious concern. Indoor and outdoor air pollution disproportionately impact disadvantaged communities and communities of color, and California continues to lead the nation in air pollution and its health impacts. These structural inequities must be addressed with urgency. Fossil fuel combustion in buildings release seven times more NOX pollution than do all of California's power plants, and UCLA research has demonstrated serious health impacts from combustion inside homes. A 2019 CEC report by Berkeley Economic Advising and Research found the "benefits of electrification significantly outweigh the costs" and "more dramatically, the public health benefits are greater...for disadvantaged communities and contribute to reducing inequality." The health-related costs of combustion in buildings are significant and part of the CEC's responsibility to develop an energy code that works for all Californians.

Fortunately, solutions are readily available. All-electric buildings of all types and sizes are being designed today by architects across the state. They use efficient electric appliances that run on California's rapidly expanding clean renewable energy supply supplemented with solar. Rapid advances in energy storage and demand flexibility continually make our electric grid more efficient and affordable. Electrification will reduce carbon emissions and other pollutants, improve health outcomes, lower energy costs, help mitigate fire risk, and aid California in meeting its legislated carbon reduction targets. The 2022 code will become effective on January 1st, 2023, and that is high time for a Title 24 that is definitive in requiring electrification.

Thank you for your continued commitment and leadership to help to protect future generations.

Best regards,

A handwritten signature in black ink, appearing to read "David Johnson". The signature is fluid and cursive, with a large initial "D" and "J".

David Johnson, AIA  
Principal