

DOCKETED

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| Docket Number: | 17-BSTD-01 |
| Project Title: | 2019 Building Energy Efficiency Standards PreRulemaking |
| TN #: | 217475 |
| Document Title: | Formal Comments on the 2019 Code Presentation |
| Description: | Staff submission of comments for Sean Armstrong, Redwood Energy. |
| Filer: | Adrian Ownby |
| Organization: | California Energy Commission |
| Submitter Role: | Commission Staff |
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From: Sean Armstrong <seanarmstrongpm@gmail.com>

Date: May 5, 2017 at 1:40:01 AM PDT

To: "Shirakh, Maziar@Energy" <Maziar.Shirakh@energy.ca.gov>, "Meyer, Christopher@Energy" <Christopher.Meyer@energy.ca.gov>, "Pennington, Bill@Energy" <bill.pennington@energy.ca.gov>, Ken Rider <ken.rider@energy.ca.gov>

Subject: Re: Formal comments on 2019 Code Presentation

Drat. Found a typo, corrected below. Please accept this instead.

Dear Misters Pennington, Maziar, Christopher and Rider,

Thank you for your earnest efforts on behalf of the citizen of California, and the citizens of the other forty-nine states of the Union who benefit from your work.

My comment, in brief, is that you please dedicate one or more CASE workshops to developing all-electric Energy Codes for Commercial and Residential Construction. You reported that the upcoming version of CBECC-RES includes functionalities for Demand Response, Thermal Storage, Electrochemical Storage--these are exciting opportunities to implement The Global Warming Solutions Act of 2006.

In 2006 the State effectively declared that all fossil fuels, methane gas included, needed to be reduced to an amount no more than 20% of 1990 levels. In 2006 the law reflected well-established technical reality--all-electric homes already existed nation-wide and globally, and it was clear that an electric grid could be powered exclusively with renewable energy. In 2006 as well as today, there is no necessary role for methane or other fossil fuel combustion in our lives.

To that point, my second request is that you please begin to phase out gas in the 2019 Code by reducing it's role in the Standard to an assumption of no more than 20% of a house's load--enough for one to two modest methane loads, such as Cooking or Laundry Drying, assuming a high performance envelope house. As noted in the NRDC comments, Heat Pump DHW can even be a significant grid operators' resource, as proven by utilities like Duke in Florida, which uses heat pump water heaters and electric resistance tanks for Demand Response with 400,000 participants.

Thank you for creating so many functions in the CBECC-RES software to support electric equipment. Please use the CASE process to explore these tools--we need to implement an all-electric code with no legal gas hook-ups. Perhaps in the 2022 Code cycle?

Sincerely,
Sean Armstrong

P.S. Could you please submit these to whatever comment docket is appropriate following your presentation? I'm not familiar with how. Thank you.

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You are warmly invited to Redwood Energy's 3rd Zero Carbon/ZNE Retreat, July 27-28, 2017

<http://www.zneretreat.com/>