

## DOCKETED

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*Comment Received From: Kelly Murphy*

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**Steffes comments on August 22nd Staff ZNE workshop**

*Additional submitted attachment is included below.*



Commissioner Andrew McAllister and Energy Commission Staff  
California Energy Commission  
Dockets Office MS-4  
Re: Docket No. 17-BSTD-01  
1516 Ninth Street  
Sacramento, CA 95814-5512  
[docket@energy.ca.gov](mailto:docket@energy.ca.gov)

August 29, 2017

RE: August 22<sup>nd</sup> Staff Workshop on Residential Solar PV, Storage, the Energy Design Rating and Grid Integration Impacts for the 2019 Building EE Standards - Solar/Storage and Energy Design Rating.

Dear Commissioner McAllister and Energy Commission Staff:

We again appreciate this opportunity to comment and offer our feedback regarding the 2019 Building Energy Efficiency Standards PreRulemaking. Our remarks pertain to the presentation led by Mazi Shirakh, PE, and ZNE Lead on the Proposed 2019 Building Energy Efficiency Standards ZNE Strategy. Quite remarkably to us, within that presentation water heaters were included in 3 separate slides: on #12 adjacent to a “smart battery”, on #22, and again on #24 once again flanking “smart batteries”.

These repeated water heaters references may have been driven by DNV/GL - Water Heater Technology Economic Assessment: Draft Report (on page 29) which stated: “Electric water heaters are perhaps the most flexible residential load on the grid.” DNV GL also went on to point out the attractive present value merits of other varieties of electric water heaters (in addition to the heat pump water heaters pictured in the ZNE presentation) including grid-interactive electric resistance water heaters (GIWH).  
[https://pda.energydataweb.com/api/downloads/1832/Water%20Heat%20Technology%20Economic%20Assessment%20\\_DraftReport\\_v3%20clean.pdf](https://pda.energydataweb.com/api/downloads/1832/Water%20Heat%20Technology%20Economic%20Assessment%20_DraftReport_v3%20clean.pdf)

As was pointed out in the ZNE presentation, the 2019 BEES will require or encourage smart, grid harmonized PV systems that will greatly reduce or eliminate the distribution system impacts of the proposed PV systems. One technology (*for now*) separate from GIWH is the ICC-SRCC OG-300 certified Solar Water Heater with electric backup driven by PV – a Grid Harmonization Strategy (GHS) maximizing self-utilization of the PV array output and minimizing exports back to the grid. As you know, the California Building Code (Title 24) contains a number of references to SRCC and or OG 100 / OG 300 and Section 150.0 (n) (3) states that “Solar water-heating systems shall be certified and rated by the Solar Rating and Certification Corporation (SRCC) or by a listing agency that is approved by the Executive Director.”

Thank you once again for the opportunity to provide this additional submittal. We are greatly encouraged by the forward looking inclusion of water heater technologies which include yet undiscovered optionality. I welcome further dialog with you. My direct line number is 701-690-7428.

Very truly yours,

/s/

Kelly Murphy