

DOCKETED

Docket Number:	17-BSTD-01
Project Title:	2019 Building Energy Efficiency Standards PreRulemaking
TN #:	217451
Document Title:	SCE Comments on 2019 ZNE Standards Workshop
Description:	N/A
Filer:	System
Organization:	Southern California Edison
Submitter Role:	Public
Submission Date:	5/5/2017 1:19:09 PM
Docketed Date:	5/5/2017

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Submitted On: 5/5/2017

Docket Number: 17-BSTD-01

SCE Comments on 2019 ZNE Standards Workshop

Additional submitted attachment is included below.

May 5, 2017

California Energy Commission
Docket Office, MS-4
Re: Docket No. 17-BSTD-01
1516 Ninth Street
Sacramento, CA 95814-5512
docket@energy.ca.gov

Re: Southern California Edison Company's Comments on the California Energy Commission Docket No. 17-BSTD-01: 2019 Zero Net Energy Standards

Dear Commissioners:

Southern California Edison (SCE) appreciates the opportunity to file written comments on the April 20, 2017 Zero Net Energy (ZNE) Standards and Photovoltaic (PV) Ordinance Workshop ("the workshop"). SCE also appreciates the Energy Commission's efforts and accomplishments to date on the Title 24 standards, and looks forward to providing additional support and input going forward.

SCE supports the Energy Commission's efforts in continuing to develop robust building simulation compliance software (CBECC-Res) to assist with the development of the 2019 Title 24 Codes and Standards to capture the performance of distributed energy resources (DERs), such as PV panels and batteries, to reach ZNE goals. However, without access to the tools that were used to develop the analysis, or a clear understanding of the assumptions that went into developing it, SCE and other stakeholders cannot yet provide meaningful input or robust commentary on this workshop. As such, SCE recommends that the Energy Commission: (1) provide stakeholders with access to the CBECC-Res software utilized for the Title 24 analysis discussed at the workshop as soon as possible, (2) provide clarity on the assumptions and inputs used in this analysis, and (3) address comments in the May 23 staff workshop¹ to help stakeholders in addressing questions, such as those set forth by SCE in this letter.

SCE expands on each of these recommendations, as follows:

¹ Workshop noted in Pre-Rulemaking Schedule presented during Workshop; See: http://docketpublic.energy.ca.gov/PublicDocuments/17-BSTD-01/TN217285_20170424T162105_4202017_Staff_Workshop_Introduction.pdf at Slide 14

A. The Energy Commission Should Allow Comments on the on the CBECC-Res Software After It Becomes Publicly Available

The Energy Commission's analysis depicted in its workshop presentation² relied on the use of the "CBECC-Res" software, which is currently unavailable to the public. Without access to the software that was used in the analysis, SCE and stakeholders cannot provide meaningful comments on the analysis. In order to facilitate more substantive and robust discussions about the Title 24 analysis, SCE recommends that the Energy Commission make the CBECC-Res software accessible to stakeholders as soon as possible; preferably in advance of the next May 23 workshop, so that they can better understand how it functions, and the process behind developing the analysis that the Energy Commission presented during the workshop. This way, stakeholders can provide more informed comments sooner; ideally at the next workshop.

B. The Energy Commission Should Provide Greater Transparency on the Assumptions, Software Algorithms, and Inputs Used in the Analysis

The Title 24 analysis required certain assumptions, software modeling algorithms, and inputs, which are not entirely transparent in the Energy Commission's workshop presentation. SCE has several clarifying questions on the assumptions, algorithms, and inputs used, which are further detailed in Section C, below.

In addition to providing greater transparency on the assumptions, algorithms, and inputs used in the analysis; SCE believes that the analysis should be adaptable to changes in instances where certain assumptions do not come to fruition. For example, assumptions were made about the use and control of behind-the-meter energy storage devices and the Net Energy Metering (NEM) Successor Tariff. Uncertainties remain on both items. For example, the California Public Utilities Commission has determined that the current NEM Successor Tariff will be reassessed in 2019 in the NEM Successor Tariff Decision (D.16-01-044).³ The stakeholder process for the reassessment of the Successor Tariff has not been completed, and therefore, the inputs and assumptions for the future tariff used in the Energy Commission's analysis could be very different than the tariff that is ultimately adopted. As such, any tools or models used to inform the codes and standards should be able to reflect these changes accordingly.

C. SCE Requests the Energy Commission to Consider Discussing the Following Items at the Upcoming May 23, Workshop

SCE believes that the May 23, 2017 staff workshop, could provide greater clarity, and to facilitate more informed discussions regarding the Title 24 analysis. During that workshop, the Energy Commission should provide clarification on issues, including, but not limited to, the following:

² See: 2019 Building Energy Efficiency Standards ZNE Strategy at: http://docketpublic.energy.ca.gov/PublicDocuments/17-BSTD-01/TN217286_20170424T162107_4202017_Staff_Workshop_Zero_Net_Energy_Strategy_Presentation.pdf

³ See: <http://docs.epuc.ca.gov/PublishedDocs/Published/G000/M158/K181/158181678.pdf>

- **Clarification on Time-Dependent Valuation and Energy Design Rating:** It is unclear how Time-Dependent Valuation (TDV) converts to an Energy Design Rating (EDR) score (e.g., on Slide 17, how does the Reference Design of 208.52 kTDV/ft²-yr and Proposed Design of 56.65 kTDV/ft²-yr translate to a Final Standard Design EDR of 25.1 and Final Proposed EDR of 24.3?).
- **Clarification on “Standard” vs. “Reference” Design Terminology:** Some of the terminology used in the workshop presentation should be more clearly defined or clarified (e.g., Is “reference design” the same as “standard design; or is it the same as “reference design” as shown on slide 13 where the reference is a 2006 IECC compliant home?).
- **Clarification on Methodology for Energy Load Reduction Impacts:** It is unclear to SCE how the indoor lighting and plug loads could be reduced by such a large percentage between the “Reference Design” and the “Proposed Design” in the examples provided in the workshop presentation (i.e., on slide 17, indoor lighting reduced from 2,615 kWh to 616 kWh, and plug loads reduced from 3,267 to 2,371).
- **Clarification on Differentiation between Retail Rates and NEM Rates:** It is unclear to SCE whether CBECC – Res uses different TDV values for renewable generation to account for the differences between retail electric rates (i.e., grid supplied energy from the utility) versus NEM rates. SCE seeks clarification as to whether different TDV values are used, and how those values differ.
- **Clarification on Solar PV + Electric Vehicle households:** In situations where PV systems are sized in compliance with NEM tariff requirements to accommodate for electric vehicle charging (EV charging loads not recognized by CBECC-Res), SCE seeks clarification as to how CBECC-Res values this instance of “overgeneration” by the PV system.
- **Clarification on Definition of “Mixed-Fuel Home”:** SCE requests that the Energy Commission develop a standard definition of a “mixed fuel-home,” so as to provide consistency and clarification on the meaning of this term.
- **Clarification on Grid Harmonization and Optimal Battery Control:**
 - What are the assumptions for storage costs and inverters?
 - What do “Optimum Battery Controls” entail?
 - What are the assumptions regarding utility “control” of energy storage devices?
- **Clarification on “Gas Availability” for Cost-Effectiveness:** SCE would like to have further discussions regarding the CBECC-Res software’s assumptions for gas availability to buildings and how the energy baseline is calculated.

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SCE appreciates the Energy Commission's consideration of these comments and looks forward to its continuing collaboration with the Energy Commission and stakeholders as these standards are further developed. Please do not hesitate to contact me at (916) 441-3979 with any questions or concerns you may have. I am available to discuss these matters further at your convenience.

Very truly yours,

/s/

Catherine Hackney