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SoCalGas Comments on August 22 Title 24 ZNE Workshop

Additional submitted attachment is included below.

August 22, 2017 Proposed 2019 Building Energy Efficiency Standards ZNE Strategy Presentation Comment Letter

In Regards to CEC Docket #17-BSTD-01

September 6, 2017



Background

The California Energy Commission (CEC) is undergoing its pre-rulemaking for the 2019 Building Energy Efficiency Standards (Standards). CEC staff conducted a public workshop to present Zero Net Energy (ZNE) related updates on April 20, 2017,¹ and SoCalGas® and SDG&E jointly submitted comments on May 5, 2017.² CEC conducted an additional related workshop on August 22, 2017,³ and SoCalGas is providing these comments in response to the CEC presentation by Mazi Shirakh with document title “Presentation - Proposed 2019 Building Energy Efficiency Standards ZNE Strategy”.⁴ All related documents are available online in CEC Docket #17-BSTD-01.⁵

SoCalGas Comments

The 2019 Standards represent a substantial effort on the part of the CEC, its staff, and the numerous parties that participated in the workshop. SoCalGas appreciates the extensive efforts the CEC has taken to present a balanced energy approach striving to minimize potential negative impacts to the electric grid while giving builders, local jurisdictions, and California utility customers the flexibility to identify and choose the most effective pathways to comply with California’s ZNE goals. SoCalGas appreciates the opportunity to provide the following comments.

Balanced Energy Approach

With California’s aggressive greenhouse gas reduction goals, many have asserted that the best path to achieve those goals is through widespread electrification. However, when appropriate analyses are conducted, it raises concerns around grid reliability and harmonization. This issue has been recognized through what is commonly known in California as “the duck curve,” depicting net load over a 24-hour period. A comparison of forecasted versus actual net load shows that this issue develops faster and more pronounced than anticipated, and requires assertive mitigation.^{6,7,8} The CEC reiterates in its latest ZNE strategy presentation that these concerns are exacerbated due to solar photovoltaic (PV) over-generation from buildings. SoCalGas urges the CEC to continue on the path of balanced energy, allowing builders and designers to utilize all available resources, from higher efficient energy systems to multiple fuel sources, both for conventional use and renewable generation systems. This approach fosters innovation, competition and flexibility, while still advancing California’s energy policies. SoCalGas participates in multiple research and demonstration projects that showcase the

¹ <http://www.energy.ca.gov/title24/2019standards/prerulemaking/documents/index.html#04202017>

² [http://docketpublic.energy.ca.gov/publicdocuments/17-bstd-](http://docketpublic.energy.ca.gov/publicdocuments/17-bstd-01/tn217465_20170505t170011_marc_esser_on_behalf_of_socalgas_and_sdge_comments_april_20_201.pdf)

[01/tn217465_20170505t170011_marc_esser_on_behalf_of_socalgas_and_sdge_comments_april_20_201.pdf](http://docketpublic.energy.ca.gov/publicdocuments/17-bstd-01/tn217465_20170505t170011_marc_esser_on_behalf_of_socalgas_and_sdge_comments_april_20_201.pdf)

³ <http://www.energy.ca.gov/title24/2019standards/prerulemaking/documents/index.html#08222017>

⁴ [http://docketpublic.energy.ca.gov/publicdocuments/17-bstd-](http://docketpublic.energy.ca.gov/publicdocuments/17-bstd-01/tn220876_20170824t105443_82217_zne_strategy_presentation.pdf)

[01/tn220876_20170824t105443_82217_zne_strategy_presentation.pdf](http://docketpublic.energy.ca.gov/publicdocuments/17-bstd-01/tn220876_20170824t105443_82217_zne_strategy_presentation.pdf)

⁵ <https://efiling.energy.ca.gov/lists/docketlog.aspx?docketnumber=17-bstd-01>

⁶ <https://www.eia.gov/todayinenergy/detail.php?id=32172>

⁷ http://www.scottmadden.com/wp-content/uploads/2016/10/Revisiting-the-Duck-Curve_Article.pdf

⁸ <http://www.nrel.gov/docs/fy16osti/65023.pdf>

feasibility and success of a balanced energy approach, and will continue to support the CEC in defining and executing similar projects in the future.

Cost Effectiveness

SoCalGas agrees with the CEC that PV systems should be sized to meet electric kWh and that PV tradeoffs for energy efficiency should be disallowed. Cost effectiveness varies regionally and allowing flexibility for consumers and builders to select from multiple compliance paths and energy options with comparatively small PV systems maximize the cost effectiveness potential in designing ZNE homes.

Balanced energy homes should continue to be supported as the CEC and its consultants have recommended beginning on slide 14 of the latest ZNE strategy presentation. Cost effectiveness concerns for all-electric homes are compounded by recent field studies where nameplate energy factors of heat pump water heaters were found to be significantly higher than actual (for example, “real world” EF 1.77 vs. nominal rating of 2.4).⁹

SoCalGas is supportive of CEC’s sensitivity analysis of plausible future modifications to NEM rates. In the California Public Utility Commission’s (CPUC) latest NEM ruling, they state that NEM will be reevaluated in 2019. Given the exacerbation of the duck curve due to PV, it is reasonable to assume that the CPUC will further reduce the value of PV electricity exports to the grid, especially during mid-day. Furthermore, the CPUC used the same reasoning recently when it ruled that SDG&E can soon shift their summer on-peak time of use (TOU) period from 11 am – 6 pm to 4 pm – 9 pm. The 2019 Standards will be effective in January 2020 and the life cycle analysis is 30 years, so both these electricity rate changes, and surely more, will be effective during that period.

More fundamentally, CEC should consider updating their residential electricity rate forecasts in the Integrated Energy Policy Report (IEPR) to account for the upcoming prevalence of residential PV, and the impact of mandated and new TOU and NEM rates. The TDV schedules and CBECC-Res should then be updated accordingly. CEC should also consider adding utility bill calculations to CBECC-Res so building owners can anticipate their utility bills.

Finally, a few items were missing: multifamily cost effectiveness calculations and E3’s referenced technical report. Multifamily cost effectiveness calculations are especially important given the limited available roof area for PV, and the need to improve and justify the related PV exception that was proposed. The E3 technical report surely includes numerous important details left out of the presentation, and stakeholders need time to review those details and provide public comments.

Reach codes

SoCalGas agrees with the CEC in recognizing the State’s goals as a collective effort, inclusive of the important role local jurisdictions have in maintaining authority to adopt cost-effective reach codes as a strategy to capture energy savings beyond minimum state requirements. SoCalGas provides support to local jurisdictions looking to implement a reach code through the development of tools and resources including cost-effectiveness studies and this support will continue as California strives to meet ZNE goals.

⁹ http://aceee.org/sites/default/files/pdf/conferences/hwf/2017/Howlett_Session3B_HWF17_2.27.17.pdf

In summary, through a cost-effective balanced energy strategy, SoCalGas is supportive of the 2019 Building Energy Efficiency Standards approach to reach ZNE goals. We thank the CEC for the opportunity to provide these comments and will continue to be involved through the 2019 rulemaking process.

Sincerely,

A handwritten signature in black ink, appearing to read 'SK', with a long horizontal line extending to the right.

Sue Kristjansson
Codes & Standards and ZNE Manager
Southern California Gas Company