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SCE Comments on 2019 Building Energy Efficiency Standards

Additional submitted attachment is included below.

California Energy Commission
Docket Office, MS-4
Re: Docket No. 17-BSTD-01
1516 Ninth Street
Sacramento, CA 95814-5512
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Re: Southern California Edison Company's Comments on the California Energy Commission Docket No. 17-BSTD-01: August 22, 2017 Workshop on Residential Solar Photovoltaic, Storage, the Energy Design Rating and Grid Integration Impacts for the 2019 Building Energy Efficiency Standards

Dear Commissioners:

Southern California Edison ("SCE") appreciates the opportunity to file written comments on the August 22, 2017 Workshop on Residential Solar Photovoltaic, Storage, the Energy Design Rating and Grid Integration Impacts for the 2019 Building Energy Efficiency Standards ("the workshop"). SCE also appreciates the California Energy Commission's ("Energy Commission," or "CEC") 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 overall approach to the proposed building energy standards and appreciates the interest and effort that the Energy Commission has shown to integrate and harmonize buildings with the electric grid. SCE supports the enabling of customers to have options in managing their energy use. To that end, SCE is modernizing the grid to support California's transition to a cleaner and more sustainable future that includes distributed renewable generation resources, energy efficiency, energy storage, electric vehicles, and demand response.

Key points in response to the workshop presentations include:

- Further evaluation is needed regarding the potential impacts of storage
- Further analysis is need to justify Photovoltaic Compliance Credit and energy storage sizing and operation assumptions
- Impacts on customer rates should be considered in evaluating community solar options
- Loading order should determine the priority of resources

SCE looks forward to continued engagement with staff on this important effort.

I. Further Evaluation of the Potential Impacts of Storage

SCE agrees that storage will play an important role in achieving California's Zero Net Energy policy objectives and supports the CEC's inclusion of it as an option in the 2019 Title 24 standards. SCE is actively working on the integration of battery storage, as well as other distributed energy resources (DERs), with the electric grid. There are many issues that will need to addressed that include updating rate tariffs, interconnection tariffs, utility incentive programs, future demand response programs – including those for over-generation from renewable energy, control of behind-the-meter DERs, and the California Independent System Operator (CAISO) market

participation. The value of distribution services that technologies like storage can offer varies widely based on location-specific characteristics. The value of energy storage and its subsequent treatment by Title 24 is currently being investigated and will need further study and coordination.

II. Photovoltaic Compliance Credit and Energy Storage Sizing and Operating Assumptions

SCE supports limiting the benefits of the PV compliance credit to systems that meet, but do not exceed, the estimated annual electricity usage and also allowing projects to downsize the PV system when battery storage or other Grid Harmonization Strategies (GHS) are included in the system. Allowing significant over-sizing of PV systems may inadvertently encourage violation of NEM-successor regulations. Without being able to participate in utility tariff structures bound by these specific rules, the benefit-to-cost ratio for the generation and storage system may be jeopardized.

SCE recommends that the Standards or supporting documentation direct builders and contractors to disclose to customers that use of the system to discharge electricity into the grid may be subject to rules set forth by state regulatory agencies. How the storage systems will be used over the lifetime of the technology will largely be determined by the customer. Guidance that directs contractors and builders work closely with the CPUC and utilities to ensure that access to accurate information is provided to the customer is essential. If the customer will need to enroll in a utility program, or take service under a particular rate, to realize the benefits of an advanced storage system, this information must be shared with the customer in advance of a commitment to purchase the system.

The explanation of what features battery storage will need to demonstrate to qualify as "advanced control" is still evolving, creating the potential for misunderstanding or misuse of the proposed credit. SCE hopes that the CEC will provide ample documentation to support the classification of "advanced control". A specific concern is that the electrical grid's critical system peak can be very different from an individual circuit's peak and these may not necessarily coincide with TDV load curves developed by the CEC, which is a large determining factor in calculating energy savings and cost effectiveness of the standards.

Lastly, it was noted in the workshop presentations that the CEC's analysis of BTM battery included a default one-way efficiency value of 95%. SCE believes that this value represents a "best in class" or "best scenario" efficiency and is not representative of all systems. More importantly, SCE recommends using an AC round-trip energy efficiency metric, as it is a more accurate measure of system performance. SCE encourages the CEC to require support documentation for any efficiency values that exceed the default battery storage performance values utilized in the compliance software.

III. Community Solar

SCE applauds the CEC for looking at alternative compliance options, especially for buildings where onsite renewables aren't feasible. In addition to the attributes evaluated, another important attribute that should be considered is the impact that any

proposal would have on customer energy bills. A benefit to a subset of California residents' homes should not create an outsized burden for the rest of the state's energy customers.

IV. Loading Order Should Determine Resource Priority

SCE supports the CEC's continued commitment to the loading order through the proposed requirement that Title 24, Part 6 2019 projects meet energy efficiency thresholds prior to obtaining beneficial credits for including photovoltaic (PV) system generation. This is in keeping with the importance of placing cost-effective energy efficiency strategies first. Tradeoffs between renewables and efficiency measures are permitted in the 2016 Title 24, Part 6 compliance process to facilitate and support the installation of more systems in preparation for 2020. As PV systems continue to decline in price, it is time to return focus to efficiency measures. Setting separate energy efficiency and generation targets is consistent with the CPUC loading order, ensuring cost-effective energy efficiency measures are installed prior to seeking other resources. Requiring projects to meet a specified level of efficiency will ensure that the Standards do not encourage unnecessary self-generation. As the deployment of residential PV continues to increase, it is critical to refer to the loading order and reinforce that the best practice may be to use less electricity, not generate more. However, there needs to be consideration made for giving credit for the use of a project's renewable energy generation for electric water heating and space heating in both the prescription and performance compliance paths.

V. Conclusion

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 and deployed. 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