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Submitted On: 3/1/2019  
Docket Number: 19-BSTD-01*

**Southern California Edison Company's Comments on the Draft 2019  
ACM Reference Manuals and Compliance Software Tools**

*Additional submitted attachment is included below.*

California Energy Commission  
Docket Office, MS-4  
Re: Docket No. 19-BSTD-  
011516 Ninth Street  
Sacramento, CA 95814-5512  
docket@energy.ca.gov

Re: Southern California Edison Company's Comments on the California Energy Commission's Draft 2019 Alternative Calculation Method Reference Manuals (ACM) and Compliance Software Tools: Commission Docket No. 19-BSTD-01

Dear Commissioners:

Southern California Edison (SCE) appreciates the opportunity to file written comments on the Draft 2019 Alternative Calculation Method Reference Manuals (ACM) and Compliance Software Tools workshops, presented on February 13-15, 2019. SCE appreciates the efforts and accomplishments of the California Energy Commission (CEC or "Commission") to date on the Title 24 standards and accompanying ACM Reference Manual, and looks forward to providing additional support and input.

SCE supports several of the proposed ACM updates and is appreciative of the Commission staff's efforts and hard work in updating the ACM and compliance software tools to support the adopted 2019 Title 24 building energy code. These updates are a critical step in supporting the state's greenhouse gas (GHG) reduction goals in a way that supports electrification and broadens customer choice in energy-efficient building design.

SCE's comments target specific areas that, if not addressed in the near term, could result in missed electrification opportunities that support GHG reduction goals. SCE herein provides comments on the following items:

- I. Residential Variable Capacity Heat Pump (VCHP) modeling approach
- II. Non-Residential Variable Refrigerant Flow (VRF) equipment software module
- III. Non-Residential HVAC System Mapping
- IV. Community Solar
- V. Storage Credit

#### **I. Residential Variable Capacity Heat Pump (VCHP) modeling approach**

SCE supports the proposed performance credit for VCHP systems, which increase energy-efficient and low GHG-emitting technology options for builders and homeowners. SCE also supports exploring a future modeling approach that will potentially increase the credit for these systems based on performance lab testing and additional field testing. We encourage the CEC to further evaluate the CSA EXP07 test procedure as a standard for testing VCHP equipment.

#### **II. Non-Residential Variable Refrigerant Flow (VRF) equipment software module**

SCE commends the Commission on releasing a VRF module in the non-residential compliance software. VRF modeling capabilities in building energy simulation tools have been much needed in the building design industry, and this step provides greater design flexibility to the building community in designing energy-efficient, low GHG-emitting buildings. SCE encourages the Commission to participate in the development of ASHRAE 205 Standard Representation of Performance Simulation Data for HVAC&R and

Other Facility Equipment. This standard will further develop the modeling accuracy of these systems in the compliance software.

### **III. Non-Residential HVAC System Mapping**

SCE fully supported the residential prescriptive compliance option for electric water heaters that was adopted in the 2019 residential energy standard. This removed the disincentive for constructing all-electric residential buildings and broadened customer choice. Additionally, SCE recognized that this was an important step in progressing toward the state's GHG reduction goals.

SCE proposes that a similar approach be applied to non-residential buildings, especially mid- and high-rise multifamily buildings. The proposed ACM non-residential baselines reference ASHRAE 90.1 HVAC and domestic hot water (DHW) system mappings that use gas systems. This, coupled with the 2019 Time Dependent Valuation (TDV) metrics that favor gas fuel sources, would make it more difficult for an all-electric building to comply with the energy code and would disincentivize construction of what would otherwise be an energy-efficient low GHG-emitting building. By updating the non-residential system mappings to provide an independent compliance pathway for gas and electric HVAC and DHW systems, the Commission can continue to expand customer choice, as they did with residential buildings, and further advance the state in achieving AB 3232's goal of reducing emissions in California's building sector by 40% below 1990 levels by 2030.

### **IV. Community Solar**

SCE recognizes that community-shared solar generation can provide benefits to buildings that do not have adequate solar access and to customers who otherwise would not have access to such technology. SCE has initiated a working group with Commission staff and IOUs (and will be including other stakeholders) to work through the challenges of implementing community solar. We look forward to supporting the Commission in developing a methodology that fairly and appropriately accounts for community solar benefits.

### **V. Storage Credit**

SCE looks forward to continuing work with the Commission on capturing the appropriate value of thermal storage, while also continuing to value energy efficiency (EE) and the loading order. SCE would like to see the storage credit available for batteries expanded to include thermal storage (e.g. heat pump water heaters). However, we do not want this credit to be overused for compliance at the expense of EE — we think the Commission should develop a balanced approach to storage credit — and we stand ready to work with Commission staff to that end.

### **VI. Conclusion**

SCE appreciates the Commission's consideration of these comments and looks forward to its continuing collaboration with the Commission and stakeholders as the ACM and compliance software tools are further developed and deployed. Again, these statements are in support of the Commission's publicly stated objective of moving toward valuing GHG reduction in a way that supports electrification.

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