

**DOCKETED**

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<b>Project Title:</b>	Solar Equipment Lists Program Implementation
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Submitted On: 4/14/2023  
Docket Number: 18-SOLAR-01*

**Request for Information â€“ CECâ€™s Solar Equipment Lists**

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*Additional submitted attachment is included below.*

**STATE OF CALIFORNIA  
BEFORE THE CALIFORNIA ENERGY COMMISSION**

<b>In the matter of:</b>	)	Docket No. 18-SOLAR-01
	)	
<b>Solar Equipment Lists Program Implementation</b>	)	SMUD Comments Re:
	)	Request for Information – CEC’s Solar Equipment Lists
	)	
	)	April 14, 2023
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**Comments of SACRAMENTO MUNICIPAL UTILITY DISTRICT on  
Request for Information  
California Energy Commission’s Solar Equipment Lists**

The Sacramento Municipal Utility District (SMUD) appreciates the opportunity to provide input and comments to the California Energy Commission (CEC) to inform the development of the CEC’s Solar Equipment Lists--including inverters and related solar energy equipment.

The CEC’s Solar Equipment Lists are a valuable resource for SMUD, and we rely on them to streamline our distributed energy resource (DER) interconnections. To date, we have used this information to support interconnection of distributed solar and storage resources. However, SMUD is presently exploring pilot projects to enable Vehicle-to-Grid (V2G) in residential and commercial fleet applications and appreciates the CEC’s efforts to develop a V2G equipment list as well.

Listed below are questions posed to stakeholders in the Request for Information (RFI) of the CEC’s Solar Equipment Lists.<sup>1</sup> SMUD is pleased to offer the following initial feedback on how the Solar Equipment Lists are used by our organization.

**Discussion and Input Provided**

*1) What entity, if any, do you represent or are you affiliated with?*

We are the Sacramento Municipal Utility District (SMUD), the nation’s sixth-largest, community-owned, not-for-profit electric service. We have been providing low-cost, reliable electricity to Sacramento County for over 75 years. We serve a population of 1.5 million over a service area of 900 square miles.

*2) What is your/your organization’s primary use of the Solar Equipment Lists?*

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<sup>1</sup> RFI – CEC’s Solar Equipment Lists (<https://efiling.energy.ca.gov/GetDocument.aspx?tn=249146>). March 14, 2023.

SMUD uses the CEC Solar Equipment Lists (“the Lists”) for streamlining our distributed energy resource interconnections. For example, all of our interconnection applications require information related to modules quantities, inverters, energy storage systems, and batteries. These Lists contribute to SMUD’s ability to offer our customers an enhanced customer experience.

*3) How often do you download or reference the Solar Equipment Lists from the Solar Equipment Lists website at <https://solarequipment.energy.ca.gov/Home/Index?>*

SMUD references and downloads the Solar Equipment Lists from the CEC’s website more than three times each month. We access these Lists thousands of times a year either through automated referencing and filtering processes via software like PowerClerk or manually. This data referencing is performed for all residential and commercial solar and/or battery interconnection applications SMUD receives. Additionally, the Lists are referenced for technical information which may be used for ascertaining anticipated capability parameters of the proposed interconnected systems. Our customers and installers may also access the CEC website while researching product information before committing to purchase solar/battery equipment.

*4) Please provide information on how the Solar Equipment Lists assist you/your organization with everyday business needs:*

*i) How do they integrate with your operations?*

The CEC’s Solar Equipment Lists help streamline SMUD’s interconnection processes. Our customers reference the Lists for guidance when making purchasing decisions, and customers have shared that they view the Lists as a reliable resource produced and provided by an independent and impartial third party.

SMUD routinely downloads system details from the Lists to our billing and system operation applications like SAP, OMS, and GIS. These values are used by our operational teams to map site specific details for visibility for field crews and system operators. Data from the Lists is also used by SMUD for load forecasting and other operational needs. SMUD recently completed the first phase of implementing its Advanced Distribution Management System (ADMS) and will begin standing up our Distributed Energy Resource Management System (DERMS) in future phases---both of these critical applications rely heavily on the inverter, module, and battery data supplied in the Lists.

*ii) How would you describe the value of the lists to your efforts?*

The List is embedded in SMUD’s interconnection process via automation or manual checks and is referenced in our customer facing documentation. The Lists are invaluable to SMUD; they are a key contributor to the quality of the

overall customer experience. As we mentioned, the Lists have the reputation of being impartial and fair, which lends them credibility with our customers when they consider adopting DER and are researching the topic. The Lists offer our customers peace of mind when committing thousands of dollars towards purchase of equipment that customers may have no experience with and little operational understanding of.

PowerClerk, the software SMUD uses for interconnection applications, uses information from the Lists to pull in system details and calculate CEC-AC rating and full system nameplate values. This happens automatically and is used when SMUD enters "as-built" system details into its operational systems. If the CEC were to discontinue providing these Lists, SMUD would be required to maintain its own reference lists and values related to new manufacturer's equipment. This would create challenges due to limited staff resources and would likely require all entities that rely on the Lists to individually duplicate this work.

*iii) If applicable, approximately how many interconnection applications/permits to operate do you process, on a monthly basis, using the data on the Solar Equipment Lists?*

We process about 400 interconnection applications on a monthly basis. SMUD averages approximately 5,000 interconnection applications annually.

*5) Roughly how much time do you save on a weekly or monthly basis by using the data on the Solar Equipment Lists, as opposed to not having the lists as a reference?*

The data provided by the Lists save SMUD an average of 1 to 2 full-time employee resources (FTEs). If SMUD had to manually calculate the values provided in the Lists--during the application process alone--it would likely entail 1/2 an FTE annually. If SMUD had to create its own base list and had evaluate new products to qualify what is or is not allowed, this task would add another 1/4-1/2 FTE technical resource (e.g., Electrical Professional Engineer ).

*6) Is there a format that would improve the effectiveness of the lists or ability to use them?*

Embedding test results with interactive links within the Lists would be a helpful feature.

*7) Can you substitute the data from the Solar Equipment Lists with another data source? How would your program(s) be impacted without this resource?*

SMUD is not aware of any alternative data source that may be used to substitute the data contained in the Solar Equipment Lists.

SMUD would be greatly impacted without the Lists because we do not currently have resources to review or approve manufacturer submittals for new or existing equipment. SMUD is not positioned to perform independent, third-party verification of certification documents. Verification of equipment would require significant staff time in order to continually evaluate nuances around the standards, which may be at different stages of development or release. Creating and maintaining a list of equipment on an ongoing basis, and ensuring that this list is current and relevant, would require further investments in resources that could put additional strain on our operations, incur further overhead costs for our ratepayers, and could negatively impact our customers' experience.

*8) As an equipment manufacturer (if applicable), what are the benefits of having your equipment listed on the Solar Equipment Lists?*

Not applicable.

*9) Please share any other feedback you would like us to consider.*

We strongly encourage the CEC to continue to produce and maintain the Solar Equipment Lists. We also recommend that the CEC consider enhancing the Lists to include emerging areas of DER technologies.

In addition to our reliance on relying on the Lists for our software and interconnection applications, SMUD engineers and other staff consult the Lists several times each month to review system details if a contractor or customer has questions about approved equipment.

## **Conclusion**

SMUD appreciates the opportunity to provide input and comments to inform the development of the CEC's Solar Equipment Lists. We look forward to continuing to collaborate with staff in this proceeding.

/s/

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cc: Corporate Files (LEG 2023-0051)