
SENATE COMMITTEE ON APPROPRIATIONS

Senator Anthony Portantino, Chair
2019 - 2020 Regular Session

SB 1215 (Stern) - Electricity: microgrids

Version: June 2, 2020

Urgency: No

Hearing Date: June 9, 2020

Policy Vote: E., U., & C. 9 - 0

Mandate: No

Consultant: Ashley Ames

Bill Summary: This bill would make several changes to existing law in order to promote the use of microgrids for electrical generation. This bill would also (1) require the California Public Utility Commission (CPUC) and the California Independent System Operator (CAISO) to develop a methodology to account for the resource adequacy value of distributed storage by March 31, 2021; and (2) require the CPUC, in consultation with the Office of Emergency Services (CalOES) to create a database of critical facilities and infrastructure.

Fiscal Impact:

- The CPUC estimates it would cost \$694,000 (special fund) annually to revise the resource adequacy paradigm to account for the resource adequacy of microgrids as a whole and to consult with CalOES to create and maintain the database of critical facilities and critical infrastructure.
- Minor costs for CalOES to consult with the CPUC in order to create and maintain the database.

Background:

Microgrids. Generally, a microgrid is understood to be a self-contained, small (relative to the electric grid), electricity system with the ability to manage critical customer resources, disconnect from the electric grid when the need arises, and provide the customer with different levels of critical support. A microgrid can be as simple as a diesel-fuel generator located near a building, such as a hospital, that is able to provide needed power during an electric power outage. A microgrid can be an entire campus or community that is outfitted with solar and other technologies. Customers tend to seek reliability and resiliency services from microgrids. In particular, customers may value the desire for sufficient resources both at the utility scale, but also at the local level, in order to, better manage challenges, such as power outages due to wildfire, flooding, etc. Although each microgrid can vary in component configuration, size, and applications, generally, microgrids are made of a combination of distributed energy resources (DER), energy storage, and demand response capabilities. Nonetheless, microgrids are still a relatively nascent concept and development with continued need to research and understand their operations and implications within the electricity landscape.

Self Generation Incentive Program (SGIP). SGIP is one of the longest-running distributed generation incentive programs in the country. According to the CPUC, as of December 2016, SGIP has funded 2,178 completed projects representing over 450 megawatts (MW) of rated capacity. An additional 312 projects representing over 178 MW of rated capacity are in process towards completion. The SGIP provides incentives

to support existing, new, and emerging distributed energy resources. SGIP provides rebates for qualifying distributed energy systems installed on the customer's side of the utility meter that the CPUC, in consultation with California Air Resource Board (ARB), determines will achieve reductions in GHG emissions. Qualifying technologies include wind turbines, waste heat to power technologies, pressure reduction turbines, internal combustion engines, microturbines, gas turbines, fuel cells, and advanced energy storage systems. SGIP is funded through annual collections from utility customers in the amount of \$166 million per year through 2026. SGIP allocates 85 percent of the funds to energy storage technologies. A December 2019 CPUC decision made additional changes to SGIP implementation to address resiliency needs of customers experiencing power shutoffs. Specifically, the decision expanded the universe of customers who are eligible for the "Equity/Resiliency" incentives. The decision also authorizes \$60 million for residential projects. There is a soft target that 50 percent of this funding would be for projects in High Fire Threat District or public safety power shutoff (PSPS) Zones. Lastly, the decision implements AB 1144 (Friedman, 2019) which requires allocating 10 percent of SGIP funds collected in 2020 to customers that operate a critical facility or critical infrastructure serving communities in High Fire Threat Districts. The Decision far exceeds this with 2020 allocations of \$202.6 million in incentives for the Equity/Resiliency budget and \$236 million for large-scale storage projects that receive a resiliency adder if they provide critical infrastructure and are located in a High Fire Threat District.

Proposed Law: This bill would:

- 1) Require the CPUC, in consultation with the OES, to create a database of critical facilities and critical infrastructure, and related critical circuits, and identify with respect to each whether it serves a high fire-threat district or vulnerable transmission area. Require the electrical corporation to collaborate upon request with local governments within its service area to identify critical circuits and microgrid projects.
- 2) Require an electrical corporation to file an application with the CPUC for approval of any distribution system improvements that are necessary to allow a microgrid project to operate while disconnected from the distribution system, or to allow a critical circuit to disconnect from the distribution system. Require the CPUC to approve, modify and approve, or deny that application.
- 3) Authorize an electric corporation, electric service provider, community choice aggregator, and local publicly owned electric utilities to use capacity resulting from a microgrid project to satisfy specified resource adequacy requirements.
- 4) Require the CPUC and the CAISO to develop a methodology to account for the resource adequacy value of distributed storage no later than March 31, 2021.

Related Legislation:

SB 774 (Stern, 2019) requires specified actions related to the deployment of microgrids, including requiring exclusive utility-ownership, and, as such, ratepayer funding, of microgrids that are located in the electrical corporation's side of the electrical distribution grid. The bill is currently pending consideration in the Assembly Committee on Utilities and Energy.

SB 1339 (Stern, Chapter 566, Statutes of 2018) required the CPUC, in consultation with the CEC, and the CAISO, to take specified actions by December 1, 2020, to facilitate the commercialization of microgrids for distribution customers of large electrical corporations. The bill requires the governing board of an electric POU to develop and make available a standardized process for the interconnection of a customer-supported microgrid, including separate electrical rates and tariffs, as necessary.

AB 1144 (Friedman, Chapter 394, Statutes of 2019) required the CPUC to support resiliency during a deenergization event for communities in high fire threat districts by allocating at least ten percent (\$16.6 million) of the annual allocation of the SGIP in 2020, for the installation of energy storage and other distributed energy resources for customers that operate a critical facility or critical infrastructure in these communities.

Staff Comments:

CPUC estimates costs of \$352,000 (special fund) ongoing for assessment of microgrids. Currently, the impacts of behind-the-meter load modifying resources are accounted for in the load forecast. If they reduce peak load, the load forecast is reduced, and Resource Adequacy (RA) requirements are consequently lower. This bill would require the CPUC to revise the resource adequacy paradigm to account for the resource adequacy of microgrids as a whole. Moving these impacts from the demand side to the supply side in order to give capacity credit to microgrids would entail working with the California Energy Commission (CEC) to develop methods of backing these impacts out of load profiles to prevent double counting. Methodologies would then have to be developed for assessing the expected dispatch of the microgrid during peak hours in order to determine RA qualifying capacity values. As microgrids vary significantly in their components and operational profiles, development of methodologies for determining qualifying capacity could be complex.

CPUC estimates costs of \$342,000 (special fund) ongoing for information technology services. This bill would require the CPUC to receive critical infrastructure inventory information from electrical corporations in order to share information with CalOES and other state agencies and to perform impact analysis of utility infrastructure related to public safety events such as wildfires.

The CPUC's Information Technology Services Division would need resources to complete business analysis; develop business and data requirements in coordination with CalOES and other state agencies; perform data classification activities; design and architect common database, enterprise GIS systems, and data portal to support tracking and sharing information on critical infrastructure of regulated utilities; analyze and plan integration with existing CPUC systems and databases; assist with developing or modifying data sharing agreements and Memoranda of Understanding (MOU) with CalOES and other state agencies; perform Project Approval Lifecycle (PAL) activities related to implementing this new reportable IT project; and develop an implementation plan and budget through the PAL process.

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