Updates
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CPUC Adopts Short-Term Actions to Accelerate Microgrid Deployment

The California Public Utilities Commission (CPUC) on June 17, 2020, issued its Decision Adopting Short-Term Actions to Accelerate Microgrid Deployment and Related Resiliency Solutions in California. This decision represents a significant first step in the CPUC's ongoing Rulemaking 19-09-009 (the Microgrids Proceeding), which implements state law designed to facilitate the development of a microgrid regulatory framework.

While the decision focuses on short-term resiliency-focused strategies, upcoming tracks within the Microgrids Proceeding are expected to develop long-term standards, protocols, rates, and tariffs to facilitate the commercialization of microgrids in California. This update reviews the regulatory background of the Microgrids Proceeding and summarizes specific requirements arising from the Track 1 decision. We will continue to track and report on significant developments in the Microgrids Proceeding in future updates.

Regulatory Background Surrounding Microgrid Deployment in California

Microgrids have garnered increasing interest from California's energy regulators over the past few years. A "microgrid" refers to an interconnected system of energy loads and supply—including distributed energy resources, energy storage, demand response tools, or other management, forecasting, and analytical tools—designed to meet customer needs within a clearly defined boundary. A microgrid can act as a single entity capable of connecting to, disconnecting from, or running in parallel with the traditional electrical grid. Microgrids offer a potential tool to maintain electricity supply resiliency during electric grid disturbances, such as during public safety power shutoff events. Advocates argue that microgrids also offer cost efficiencies, local independence, and opportunities to reduce environmental impacts compared to the traditional electrical grid.

Both the CPUC and the California Energy Commission (CEC) have financed a significant volume of microgrid research and demonstration projects in California over the past eight years. For example, the CEC commissioned a separate Case Studies Report in 2018 summarizing the results of nine California-based case studies, which concluded that "California [microgrid] projects report value propositions of renewable energy integration, resiliency, bill and demand charge savings, and a reduction in carbon footprint." Similarly, in April 2014, CPUC staff published a report providing a Regulatory Perspective on microgrid deployment in California characterizing microgrids as "a challenging, yet intriguing opportunity," acknowledging "a need to develop appropriate standards and requirements to ensure that microgrids interconnect and interact with the distribution grid in a reliable and safe manner," and predicting that "the role of the electric utility will change."

SB 1339 and the Microgrids Proceeding

In 2018, the California legislature enacted Senate Bill 1339, which directed the CPUC, with help from the CEC, to craft a microgrid policy framework. The legislature identified reliability, localization, and innovation benefits to microgrid deployment[1] and directed the CPUC to develop specific standards, guidelines, protocols, rates, and tariffs to support and reduce barriers to deployment.[2]

On September 19, 2019, the CPUC issued an Order Instituting Rulemaking to establish a proceeding to craft a policy framework surrounding the commercialization of microgrids.[3] Following opening comments and public workshops, the CPUC issued a Scoping Order adopting a schedule for the Microgrids Proceeding and dividing it into three tracks.

Track 1 of the Microgrids Proceeding, which is the subject of the CPUC's recent decision, encompasses the CPUC's goal to deploy resiliency planning in areas prone to outage events and wildfires, with the goal to put some microgrid and resiliency strategies in place prior to the 2020 wildfire season. The CPUC limited the scope of Track 1 to: (1) prioritizing and streamlining interconnection applications to deliver resiliency services at key sites and locations; (2) modifying existing tariffs to maximize resiliency benefits; (3) facilitating local government access to utility infrastructure and planning data to support the development of resiliency projects; and (4) evaluating investor-owned utility proposals for immediate implementation of resiliency strategies, including partnership and planning with local governments. The decision revolves around these four issue areas.

The CPUC's Track 1 Decision

Large IOUs Must Prioritize, Streamline, and Expedite Applications for Approval of Key Resiliency Projects

The decision sets forth three pathways for the acceleration and interconnection of short-term resiliency projects. Challenges that have impeded the deployment of microgrids and other resiliency measures include technical, regulatory, and practical roadblocks. For example, a microgrid's ability to "island" distributed generation and energy storage assets (i.e., its ability to connect and disconnect these assets from the grid) generally entails a longer interconnection process to ensure there is no inadvertent export of energy to the macro-grid. Other impediments have included the allocation of resources to interconnection by the large investor-owned utilities (Large IOUs).[4]

The CPUC selected the following pathways from among options proposed by its Staff Proposal prepared earlier in the Microgrids Proceeding:

1. Large IOUs must jointly develop and implement a template-based application process for single line diagrams for specific behind-the-meter project types, including: Rule 21 non-export storage (<10kW); net energy meter paired storage (both AC and DC coupled; solar <30 kW and storage <10kW) and net energy metered solar (<30kW). The CPUC declined to standardize project diagrams by individual contractor and deferred consideration of templates for fuel cell-distributed generation and projects with greater than 10 kW storage.
2. Large IOUs must simplify and increase the transparency of processes by which they inspect and approve resiliency projects, including updating inspection handbooks and technical documents and identifying project types for which they will accept virtual inspections. The CPUC declined to require the Large IOUs to eliminate inspections that duplicate those conducted by local jurisdictions.

3. Large IOUs must prioritize interconnection of resiliency projects for key locations, facilities, and/or customers by committing additional staff and information technology resources to their respective interconnection study and distribution upgrade teams in order to enable faster interconnection processing for all projects. The CPUC declined to require the Large IOUs either to allow eligible resiliency projects to move ahead of other projects in the interconnection queue (queue jump) or to develop a second "priority" queue for eligible projects, stating it will determine each Large IOU's compliance with this prioritization mandate based on their ability to reliably meet Rule 21 interconnection timelines.[5]

The CPUC deferred to a later track of the Microgrids Proceeding a potential fourth pathway requiring the use of smart meters to advance electrical isolation.

Large IOUs Must Modernize Their Net Energy Metering Tariffs to Maximize Social Resiliency Benefits

The decision addresses two additional barriers to microgrid deployment that the staff proposal identified as inherent to current net energy metering tariffs: (1) the limit on storage charging; and (2) the limit on storage sizing and capacity.

With respect to existing limits on storage charging, the decision directs the Large IOUs to coordinate with developers and aggregators on a process that allows energy storage systems to import from the grid in advance of an announced public service power shutoff (PSPS) event. This applies only to energy storage systems interconnected under the condition that they charge from solar and only permits import from (not export to) the grid in order to ensure operators of these systems only receive net energy metering bill credits for electricity produced on-site by an eligible generator. The decision directs the IOUs to update their net energy metering tariffs accordingly.

The decision also requires the large IOUs to modify their net energy metering tariffs to temporarily remove the storage sizing limit for large net energy meter paired storage for a period of three years. Existing metering requirements for these facilities are unchanged. The CPUC declined a concurrent staff recommendation to require islanding capability for energy storage systems larger than 10kW, but noted that it might make sense in the future to require these storage systems be designed to operate independently from the grid in the event of an outage.

PG&E and SDG&E Resiliency Proposals Approved

The decision also approves an array of Pacific Gas and Electric (PG&E) and San Diego Gas and Electric (SDG&E) resiliency proposals for which the utilities sought cost recovery. PG&E will upgrade substations that can be quickly and safely energized with local sources of power; procure temporary, portable diesel generators for use at substations and other key locations of public benefit for the 2020 wildfire season; and provide technical and financial support for community-proposed PSPS-related microgrids. SDG&E will procure a local area distribution controller to enhance microgrid operation.

SCE did not seek cost recovery requiring CPUC approval for its proposed resiliency measures, which include: a microgrid public service power shutoff pilot program; subsidies for battery back-up solutions for critical care residential customers; and a customer resiliency equipment incentive pilot program.

Large IOUs Must Collaborate With Local and Tribal Governments

Last, the decision adopts solutions that promote engagement between the Large IOUs and local and tribal governments. It requires the Large IOUs to conduct semi-annual workshops to collaborate with local and tribal governments and other stakeholders[6] towards the identification of vulnerable transmission and distribution infrastructure and the making of operational and investment decisions surrounding resiliency planning. The

Large IOUs must also develop a resiliency project guide and assist local and tribal governments in navigating their interconnection processes for deploying a resiliency project. Finally, the Large IOUs must dedicate staff to manage the intake of local and tribal government resiliency projects, as well as create a separate, access-restricted data portal for these governments to review data essential for microgrid and resiliency project development.

Looking Ahead to Tracks 2 and 3 of the Microgrids Proceeding

According to the CPUC's Scoping Order, Track 2 is reserved to address the "more complex issues and contours of SB 1339 implementation," including the development of generalized microgrid standards and protocols. Track 3 will address ongoing implementation requirements of SB 1339 and any future resiliency planning.

Endnotes

[1] 2018 Cal. Legis. Serv. Ch. 566 (S.B. 1339), § 1.

[2] Cal. Pub. Util. Code § 8371.

[3] OIR 19-09-009

[4] The Large IOUs are named as respondents in the Microgrids Proceeding and include PG&E, SCE, and SDG&E.

[5] The decision further acknowledges that if Rule 21 interconnection timelines are accelerated as a result of the Interconnection Proceeding (R.17-07-007), then the Large IOUs' compliance would be measured against updated timelines.

[6] The decision states that "inclusivity is essential" to the workshops, and therefore directs the Large IOUs to include community choice aggregators and other relevant community organizations such as those that represent vulnerable populations that could provide input regarding the selection and implementation of resiliency projects. The decision does not expressly require the involvement of certain interest groups that supported the workshop proposal, such as bioenergy and telecommunications associations.

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