RCRC
RURAL COUNTY REPRESENTATIVES OF CALIFORNIA

March 15, 2021

CPUC Energy Division
ED Tariff Unit
505 Van Ness Avenue, 4th Floor
San Francisco, California 94102

RE: Response to/Comments on *Joint Utility Workshop Plan to Solicit Input on Program Elements for the Microgrid Incentive Program* (Advice Letter 6098-E/3700-E/4424-E)

To Whom It May Concern:

Introduction

On behalf of the Rural County Representatives of California (RCRC), we take this opportunity to provide comments on the *Joint Utility Workshop Plan to Solicit Input on Program Elements for the Microgrid Incentive Program* (Advice Letter 6098-E/3700-E/4424-E) pursuant to R.19-09-009's Decision 21-01-018. These comments are provided in response to the Joint IOU's solicitation of "input on program elements for the Microgrid Incentive Program."

Comments

RCRC supports the thoughtful development and deployment of microgrids as one of several tools in the toolbox to improve community energy resiliency and reduce the size, scope, duration, and frequency of deenergization events.

While we understand that the Advice Letter merely lays the groundwork for future workshops and stakeholder meetings to refine the design and implementation of the new microgrid incentive program, we believe that some comments are appropriate at this point to help guide the scope of those discussions. The Advice Letter leaves unaddressed some critical issues that are key to program success and necessary to preclude arbitrarily and unintentionally eliminating some ratepayers from participation. Those critical issues include clarifications on multi-parcel microgrids, refinements to local capacity calculations, facilitating deployment of economically viable projects, and facilitating electric vehicle charging in underserved areas. Before addressing those issues, we briefly describe a few types of local energy resiliency projects that may be well-suited for use as microgrids.

Examples of Local Projects Potentially Suitable for Use as Microgrids

We hope it is helpful to provide information on some examples of local energy projects currently under development (or that may be suitable for development) and which may serve as a microgrid under certain circumstances.

The first project is in Hidden Valley Lake, a community of roughly 8,000 people between Calistoga and Clear Lake in rural Lake County. The area has been threatened by three major fires over the last five years – fires that have destroyed nearly 100 structures and claimed several lives. In addition to the community strain caused by frequent fire threats, regular PSPS events are also negatively impacting the local economy. To address these issues Hidden Valley Lake Community Services District is working with a private partner to build a Firemain Linked Auxiliary Supply / Hydraulic Energy Storage (FLASHES) system. To help protect the town from wildfire, the project will place 25,000,000 gallons of water in tanks on land currently owned by the District at the top of Little Peak. This water will feed a pipeline that brings the water from the top of Little Peak down to the valley floor along Highway 29, dropping 1,200 feet in the process. At the bottom of the bill, the project will include hydro-turbines to convert the falling water to electricity, and a second set of tankage tank to receive the water after it exits the turbines so that the whole system forms a closed loop. Finally, the project will include a ~35 MW solar photovoltaic array to move water from the lower tank back up to the upper tank daily when energy is abundant and inexpensive. In this system, the upper tank acts as a form of energy storage by allowing the electrical energy generated by the photovoltaic array to be stored until it is more valuable. Electricity sales from the hydro-turbines will be used to pay for the project. The pipeline will also be tied into the HVLCSD fire main so it can be used to provide firefighters with access to a large volume of high-pressure water during an emergency. Additionally, a water filling station will facilitate the rapid refilling of CalFire water tankers, should the need arise. It is hoped this project will be self-financing based on the sale of the energy, capacity, and ancillary services to load serving entities. This allows a small rural community to get a desperately needed firefighting resource at no upfront cost; however, the project may also be suitable to provide power to a community microgrid. With the power source in place and a clear need, Hidden Valley Lake would seem to be a perfect candidate for the distribution system upgrades needed to make a community microgrid.

A second project is also in Lake County. Lake County is currently exploring combining a new anaerobic digester with methane storage and a highly efficient peaking generator. Due to the energy storage aspect and the high value of peaking energy and capacity, this facility could be economically viable at or near current market prices. The contemplated system can add additional duration at comparatively low cost, thereby allowing this type of installation to be expanded to deliver very long duration storage at very low marginal costs. This is especially important given the frequency with which Lake County has experienced PSPS events of the last few years. In an emergency, the peaking generator resource can be run a much lower power level for very long periods of time, which is a perfect match for microgrids serving critical loads.

These are just two examples of projects that may be suitable for microgrid development under certain circumstances. Despite the vastly different technological approaches being used in the development of microgrids, they are all seeking to meet several goals simultaneously: economic viability without increased ratepayer burden, increased resilience, and additional benefits to our communities overall. It is in the development of these and other microgrid projects in our communities that several issues have arisen that are not readily apparent topics of future discussion contemplated in the Advice Letter, as noted below.

Clarifications on Multi-Parcel Microgrids

Currently projects that try to bring benefits to multiple parcels are often in danger of running afoul of rules governing the definition of a public utility[1] or the franchise agreements of the utilities. These rules made complete sense when they were first promulgated over a century ago and are still quite helpful, but also a major impediment to the development of microgrids. The driver in this instance, like many others, revolves around the impacts of economies of scale in terms of cost effectiveness. For many of the technologies involved there is a high first unit cost and low additional unit cost, both for power and energy. Because of this economy of scale issue, no individual property out of a group of 5 might be able to have an economically viable option, but a system more than large enough to handle all of them would be viable. Because of this need to achieve economically viable size, a critical infrastructure microgrid would often need to serve multiple adjacent parcels *or very nearly adjacent parcels*. For example, in Calaveras County, the jail, courthouse, main administrative center, and emergency services facilities are all on adjacent or nearly adjacent properties, while Mark Twain Hospital and the local CalFire office are on nearly adjacent properties, but are not actually contiguous. Because they are on the other side of a major throughfare, they would be deemed ineligible under current rules when simple logic would dictate that critical infrastructure on the wrong side of the street should not be excluded. If the multi-parcel issue is to be addressed in the workshops, then real-world issues like this must be examined.

Refinements to Local Capacity Calculations

Under the current PG&E Wholesale Distribution Open Access Tariff (WDAT) construct for fast-track projects, the capacity at the individual location is examined via the Interconnection Capacity Analysis Map. The problem is that while there may be sufficient interconnection capacity just a few blocks away from a project location, the map indicates that there is insufficient interconnection capacity at the exact location.

To alleviate this issue, critical infrastructure microgrid projects should be allowed to interconnect a reasonable distance away from the actual physical address to access this available interconnection capacity. For example, in Lake County there is less than 1 MW of interconnection capacity at the Hoyt Avenue Emergency Operations Center, but

[1] We recognize that this is not the appropriate venue or body to address changes to statutory definitions and do not advocate for doing so here, but merely acknowledge that some refinements may ultimately be necessary in the long-term.

there is over 4 MW of interconnection capacity roughly 400 circuit yards away. It is not good policy to allow random vagaries of the exact locations of distribution system assets to determine which critical facility is able to build a microgrid to serve one or more critical infrastructure loads. Addressing this "nearby capacity" issue is not mentioned in the Advice Letter and should be worked into the schedule and upcoming meetings.

A similar problem exists for the location of microgrid assets. It may sometimes be preferable (or necessary) to locate the energy source a short distance from the microgrid itself. For example, in Tuolumne County's seat of Sonora, there are there are no viable locations in the immediate downtown area to place a renewable generating resource of sufficient size to power a critical infrastructure microgrid, but there are viable locations a short distance away. The workshops should also incorporate this issue to ensure that critical infrastructure microgrid projects can compete even if the generation is located at a different physical location than the served loads.

Facilitating Deployment of Economically Viable Projects

Project size is often critical to economic viability. For example, a gas expansion component on one type of system can cost several times more in absolute dollars for a 500 KW system than the same type of unit for a 3 MW system. This same trend holds for other types of systems and aspects of the projects. From engineering costs to equipment to mobilization, the costs of microgrid projects do not scale linearly. Since the ideal microgrid to serve critical infrastructure loads in extreme events would also be able to be self-funding (i.e. economically viable), it logically follows that there will be cases where the size of the microgrid resource will be larger than that needed to only serve the exact needs of the specific critical load being served. This gives rise to the questions of how much larger is too large and how can existing fast track processes be used for these projects? Does any dispensation granted for development of critical infrastructure grids apply to those serving only critical infrastructure, or can those processes be used for microgrids that serve both critical infrastructure and the general public?

Facilitating Electric Vehicle Charging in Underserved Areas

We believe that the workshops should further refine the types of facilities that qualify as Critical Infrastructure, especially with respect to emergency charging for electric vehicles and facilities that will be added to the list over the next few months. We recognize that D. 21-1-018 to implement the program using the "existing critical facilities list and processes as adopted by D.19-05-042 or in any subsequent decisions."[2] We observe that the original list established in D. 19-05-042 was expanded by D. 20-05-051 and that the CPUC is considering expanding that list still further in Phase 3 of the R.18-12-005 proceeding. We note that D. 20-05-051 included the transportation sector in the list of critical facilities and infrastructure, which was defined to include "facilities associated with automobile, rail, aviation, major public transportation, and maritime transportation for civilian and military purposes."[3] We suggest that microgrid projects should include

[2] D.21-01-018, page 34.
[3] D. 20-05-051, Appendix A Page 10.

projects that involve emergency charging for electric vehicles. Given that many rural areas are at high risk for losing power during a PSPS event, and that the state is quickly transitioning to require the use of electric vehicles, we think it is important that the deployment of microgrids not exclude projects that facilitate the recharging of electric vehicles. Furthermore, considering that the Commission is likely to add several new types of facilities to the list of "critical facilities and infrastructure" in Phase 3 of the R.18-12-005 proceeding, we suggest that the utilities develop their program frameworks in a way that they can nimbly respond to and include newly-added critical facilities to the program.

Conclusion

RCRC appreciates the opportunity to provide respond to the Advice Letter and provide comments to inform the scope of the upcoming workshops and meetings. We look forward to engaging in those workshops and meetings to refine the design and implementation of the microgrid incentive program.

Respectfully submitted,

John Kennedy
Legislative Affairs Advocate
Rural County Representatives of California
(916) 447-4806
jkennedy@rcrcnet.org

cc: Erik Jacobson, Director, Regulatory Relations, Pacific Gas and Electric Company
Gary A. Stern, Managing Director, State Regulatory Operations, Southern California Edison Company
Tara Kaushik, Managing Director, Regulatory Relations, Southern California Edison Company
Greg Anderson, Regulatory Tariff Manager, San Diego Gas and Electric
Service List R. 19-09-009
Service List R. 18-12-005

Submitted March 15, 2021

This response was sent to the utilities on the date it was submitted to the CPUC Energy Division.