



**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

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*Order Instituting Rulemaking Regarding  
Microgrids Pursuant to Senate Bill 1339.*

Rulemaking 19-09-009  
(Filed September 12, 2019)

**OPENING COMMENTS OF UC DAVIS POLICY INSTITUTE FOR  
ENERGY, THE ENVIRONMENT, AND THE ECONOMY TO ORDER  
INSTITUTING RULEMAKING 19-09-009**

October 21, 2019

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**I. Introduction**

The Policy Institute is a group of non-partisan policy researchers, academics, and graduate students who translate academic research into policy recommendations for legislatures and agencies. The Policy Institute has the aim of submitting comments and relevant research on microgrids into the record, to be used as supportive materials in the Commission’s decision-making. The Policy Institute’s participation in this proceeding will not prejudice any party and will not delay the schedule or broaden the scope of the issues in the proceeding.

In accordance with Rule 6.2 of the California Public Utilities Commission (“Commission”) Rules of Practice and Procedure (“Rules”), the UC Davis Policy Institute for Energy, the Environment, and the Economy (“Policy Institute”) submits the instant comments to Order Instituting Rulemaking 19-09-009 (“Rulemaking”).

**II. Comments**

Microgrids contribute resiliency and islanding functionality to the grid - they are a grid resource. However, microgrids also add complexity to grid planning and management

and do not as yet fit neatly into California’s existing regulatory and physical framework. The Policy Institute is supportive of this rulemaking to create a regulatory framework whereby microgrids may contribute more easily to the modern California grid in a safe, efficient, and fair manner.

Overall, the Policy Institute agrees with the issues included in the preliminary scope of the proceeding. While the Policy Institute intends to suggest areas that could be addressed more specifically within the issues presented in the Order Instituting Rulemaking,<sup>1</sup> the Policy Institute does not believe any new issues need to be included nor does it believe that any issues in the OIR should be removed. As such, the Policy Institute suggests that the following subsidiary issues could be addressed more specifically within the issues outlined in this proceeding:

- A. Specify whether the Public Utilities Code § 8370(d) and the Order Instituting Rulemaking definitions of microgrid<sup>2</sup> include “advanced microgrids”, e.g., microgrids “contain[ing] multiple customers, multiple resources, resource interconnection on both sides of the meter, islandable, capable of providing grid services, using existing distribution network, but potentially involving dedicated distribution infrastructure;”<sup>3</sup>
- B. Within OIR Issue 1, “service standards” in Public Utilities Code § 8371(a) could be defined to address engineering specifications, as well as standards of service the microgrid must provide to its end users. First, the Commission could specify whether both types of service standards will be addressed in this proceeding. Second, the Commission could require specific Microgrid engineering standards.<sup>4</sup> Also, a standard between the microgrid and its customers could be required by the Commission, for instance requiring microgrid operators to obtain a certification

<sup>1</sup> Order Instituting Rulemaking Regarding Microgrids Pursuant to Senate Bill 1339 (hereinafter “OIR”) at 6-8.

<sup>2</sup> OIR at 1.

<sup>3</sup> CPUC, *Microgrids: A Regulatory Perspective* (2015) (hereinafter “*Microgrids*”).

<sup>4</sup> *Microgrids* at 22.

that shows they have the expertise to manage a microgrid, and the ability to take on liability for it;

- C. Within OIR Issue 2,<sup>5</sup> the Commission could consider additionally providing incentives for the establishment of microgrids in some areas, such as areas with critical infrastructure (hospitals or defense), areas on the grid that experience congestion,<sup>6</sup> areas lacking reliability,<sup>7</sup> areas with vulnerable populations such as the elderly, and areas that could permanently island in the future such as rural areas that require utilities to spend large amounts to reach transmission and distribution lines to them;
- D. Within OIR Issue 2,<sup>8</sup> the Commission could develop rules for customers to join and remove themselves from a local microgrid;
- E. Within OIR Issue 2,<sup>9</sup> as suggested elsewhere within the OIR,<sup>10</sup> the Commission could ensure through appropriate rate designs that there is no ongoing cross-subsidization between non-microgrid customers and microgrid customers;
- F. Within OIR Issue 4,<sup>11</sup> the Commission could develop rules for customers' retail access to electricity from within a microgrid when the microgrid owner-operator is a non-utility;
- G. If behind-the-meter microgrids become larger, it may become important for system operators to be more aware of microgrid inputs and outputs to the grid. Within OIR Issue 5,<sup>12</sup> the Commission could determine the threshold size of microgrids, above which are required communication capabilities with the

<sup>5</sup> OIR at 7.

<sup>6</sup> See *Microgrids* at 23.

<sup>7</sup> OIR at 2, (The OIR also contemplates this: "The proceeding may also examine whether to launch pilot microgrid programs to benefit communities most likely to be affected by public safety power shutoffs").

<sup>8</sup> OIR at 7.

<sup>9</sup> OIR at 7.

<sup>10</sup> OIR at 2, ("avoiding shifting costs to ratepayers").

<sup>11</sup> OIR at 7.

<sup>12</sup> OIR at 7.

distribution system operator and possibly CAISO, and information exchange requirements for such microgrids;

- H. In developing rules for microgrid deployment, the Commission could develop a rule for how much infrastructure a utility may own behind-the-meter;<sup>13</sup>
- I. The OIR states: “Broader state policy goals in which microgrids may play a role include, but are not limited to: (1) reducing greenhouse gas emissions; (2) adapting to the impacts of a changing climate; and (3) protecting the health, safety, and lives of California residents during catastrophic events, such as wildfires, floods, earthquakes, extreme weather, or cyber-attacks. The proceeding may also examine whether to launch pilot microgrid programs to benefit communities most likely to be affected by public safety power shutoffs.”<sup>14</sup> Furthermore, issue 8 in the OIR requires that the microgrid rulemaking is consistent with “relevant state policy goals” and “existing Commission responsibilities and policies”.<sup>15</sup>

The Policy Institute agrees with the state policy goals listed in the OIR. Additional policy goals which could be advanced with this proceeding are reliability, grid management, and reducing ratepayer costs.

Related Commission proceedings which could be coordinated with this one are:

- a. Public Utilities Code § 2774.1 discusses reliability requirements. Electrical corporations must report on and work with the Commission to remediate areas with reliability problems. Microgrids could be used as a way of remediating areas that have reliability issues.
- b. Public Utilities Code § 913.2 discusses the smart grid, and the requirement that the Commission create a report on its goals for grid management to the

<sup>13</sup> *Microgrids* at 24.

<sup>14</sup> OIR at 2.

<sup>15</sup> OIR at 7-8.

governor and the CAISO. Microgrids are a distributed resource that could be included within the Commission's grid management planning.

- c. Public Utilities Code § 379.6 addresses the self-generation incentive program. This rulemaking could include self-generation incentives for microgrid self-generation that “improves efficiency and reliability... and reduces greenhouse gases, peak demand, and ratepayer costs.”
  
- J. Finally, the Policy Institute recommends sponsoring or collecting research on the role of microgrids in our future energy system and goals.

### **III. Conclusion**

We look forward to working on the many important issues that will be addressed in this proceeding.

Dated: October 21, 2019

Respectfully submitted,

*/s/ Austin Brown*

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