

UC Berkeley

Electric Grid

Title

White Paper: The EcoBlock Project and the “Own Use” Exemption under Public Utilities Code Section 218 – A Way Forward for Privately Operated Microgrids

Permalink

<https://escholarship.org/uc/item/1s88n8c6>

Authors

von Meier, Alexandra
Kammen, Daniel M

Publication Date

2021-02-01

Copyright Information

This work is made available under the terms of a Creative Commons Attribution-NonCommercial-NoDerivatives License, available at <https://creativecommons.org/licenses/by-nc-nd/4.0/>

White Paper: The EcoBlock Project and the “Own Use” Exemption under Public Utilities Code Section 218 –

A Way Forward for Privately Operated Microgrids

Submitted by Alexandra von Meier and Daniel M. Kammen

vonmeier@berkeley.edu, kammen@berkeley.edu

I. INTRODUCTION

The California Constitution and Public Utilities (P.U.) Code vest the California Public Utilities Commission (CPUC or Commission) with broad authority over public utilities, including electrical corporations. The Oakland EcoBlock project (EcoBlock) seeks to develop a microgrid within an existing city block in Oakland California as a demonstration project on the viability of retrofitting an existing block of residential and commercial buildings into a microgrid capable of islanding from the grid. In 2015, the California Energy Commission (CEC) awarded EcoBlock a grant under the Electric Program Investment Charge Program (EPIC) to develop a conceptual proposal for such a project.¹ In 2019, the CEC awarded the EcoBlock a phase II award under EPIC to help finance development of the project.

EcoBlock has considered a variety of different potential regulatory frameworks that might accommodate the objectives of the project. Based on an analysis of current law, the working model has been to rely upon existing provisions within the Public Utilities Code that recognize the right of individuals to install and operate electric equipment outside of Commission regulation if the generation, storage and distribution of power is limited to the owners’ “own use.” This white paper examines the “own use” exemption in section 218 of the Public Utilities Code and explores its potential as well as its limitations in the context of microgrids and recent Commission action. In so doing, it touches upon the recently issued Microgrid Proceeding Proposed Decision (Microgrid PD), the Commission Staff paper upon which the PD is premised and issues that arise out of both. This white paper, however, is not intended to be a critique of either and, rather, is intended to prompt questions and reflections on how the policy decisions made in these documents will foster or retard the development of projects like EcoBlock.

II. OBSERVATIONS

- The CPUC’s regulatory authority extends to public utilities, including “electrical corporations,” which the P.U. Code defines as every corporation or person owning, controlling, operating, or managing any electric plant for compensation. The owner or operator of a microgrid that meets this statutory definition is plainly an electrical corporation unless otherwise exempt.

¹ The final report for this phase of the project is available at <https://ww2.energy.ca.gov/2019publications/CEC-500-2019-043/CEC-500-2019-043.pdf>.

- While a microgrid may meet the statutory definition of “electrical corporation,” the P.U. Code’s “own use” exemption may under certain circumstances provide a basis for such an exemption.
- The Commission is poised with the pending PD in the Microgrid Proceeding to advance or impede important policy objectives about the scope of this long-established exemption from Commission regulation.

III. DISCUSSION

With limited prescribed exceptions, the P.U. Code vests the Commission with broad authority to regulate any entity that distributes for compensation or sells electric energy to the public. In September 2019, the CPUC initiated Rulemaking (R.) 19-09-009 to develop a policy framework facilitating the commercialization of microgrids and related resiliency strategies in furtherance of Senate Bill (SB) 1339. SB 1339 requires the Commission to take specific actions to facilitate the commercialization of microgrids for distribution customers of large electrical corporations.

While the Commission has adopted certain requirements to further SB 1339’s directives,² and issued a pending decision to adopt rules to facilitate the commercialization of microgrids,³ the Commission has not taken the opportunity to delineate the types of microgrids that it must statutorily regulate and those that may be exempt from its jurisdiction. This regulatory uncertainty risks delaying the development of projects like EcoBlock, which, using EPIC funds awarded by the CEC, hopes shortly to commence construction. As discussed below, recent efforts by the Commission have yet to consider the prospect of individual homeowners from banding together and pooling their resources so as to develop a microgrid for their own use. This paper invites the Commission to make use of this model in light of the longstanding “own use” exemption to ensure the important generalized policy goals of advancing microgrids while meeting the specific policy objectives of improving grid resiliency provided in SB 1339.

a) The Commission’s Natural Impulse to Regulate Microgrids.

There is an inherent and natural impulse for the Commission to regulate microgrids as public utilities given how broadly the California Constitution and P.U. Code define “public utility.”⁴ The California Constitution states that a public utility includes: “[p]rivate corporations and persons that own, operate, control, or manage a line, plant, or system for the ... production, generation, transmission, or furnishing of heat, light, water, power ... directly or indirectly to or for the

² *Decision Adopting Short-Term Actions to Accelerate Microgrid Deployment and Related Resiliency Solutions*, R.19-09-009 (June 11, 2020), D.20-06-017.

³ *Proposed Decision Adopting Rates, Tariffs, And Rules Facilitating the Commercialization of Microgrids Pursuant to Senate Bill 1339 and Resiliency Strategies* (Proposed Decision), R.19-09-009 (December 7, 2020).

⁴ Article XII, section 6 of the California Constitution provides that: “[t]he commission may fix rates, establish rules, examine records, issue subpoenas, administer oaths, take testimony, punish for contempt, and prescribe a uniform system of accounts for all public utilities subject to its jurisdiction.

public.”⁵ The legislature established the breadth and contours of what constitutes a “public utility” by adopting P.U. Code, § 216, which provides in key part that:

(a) “Public utility” includes every ... electrical corporation ... where the service is performed for, or the commodity is delivered to, the public or any portion thereof.

(b) Whenever any ... electrical corporation ... performs a service for, or delivers a commodity to, the public or any portion thereof for which any compensation or payment whatsoever is received, that ... electrical corporation ... is a public utility subject to the jurisdiction, control, and regulation of the commission and the provisions of this part.

(c) When any person or corporation performs any service for, or delivers any commodity to, any person, private corporation, municipality, or other political subdivision of the state, that in turn either directly or indirectly, mediately or immediately, performs that service for, or delivers that commodity to, the public or any portion thereof, that person or corporation is a public utility subject to the jurisdiction, control, and regulation of the commission and the provisions of this part.

Together, these three subsections stand for the proposition that an electrical corporation is a public utility whenever it performs a service for, or delivers power to any portion of the public, for compensation, even if it provides that service indirectly. P.U. Code § 218, in turn, broadly defines “electrical corporation” as “every corporation or person *owning, controlling, operating, or managing any electric plant* for compensation within [California].”⁶

“Electric plant” is defined broadly to include:

[A]ll real estate, fixtures and personal property owned, controlled, operated, or managed in connection with or to facilitate the production, generation, transmission, delivery, or furnishing of electricity for light, heat, or power, and all conduits, ducts, or other devices, materials, apparatus, or property for containing, holding, or carrying conductors used or to be used for the transmission of electricity for light, heat, or power.⁷

Thus, it should come as no surprise that the Commission is naturally predisposed to regulate microgrids. In case after case, the Commission has not hesitated to find the owner of an electric plant to be a public utility. Thus, in Decision (D.) D.11-12-056, the Commission found that The Nevada Hydro Company (Nevada Hydro), qualified as an “electrical corporation” as defined by Section 218 because it sought to construct and operate the line, for which it would receive compensation.⁸ Against this background, a microgrid that includes a *compensation* component

⁵ Cal. Const., art. XII, § 3.

⁶ Pub. Util. Code, § 218(a) (emphasis added).

⁷ Pub. Util. Code § 217.

⁸ *In the Matter of the Application of the Nevada Hydro Co. for A Certificate of Pub. Convenience & Necessity for Talega-Escondito/Valley-Serrano 500 kV Interconnect Project*, (D.11-12-056 at

likely falls within the ambit of P.U. Code sections 216, 217, and 218. That is fairly clearly what Commission staff concluded in the Concept Paper drafted in connection with the pending Microgrid Proceeding.⁹

But what about a microgrid that is established by a small group of neighboring property owners, who, for their own use and without a compensation scheme in which one owner is paid to provide the electric service to the others, develop a microgrid for their own provision of electricity? The Commission Staff's Concept Paper and, recently, the Microgrid PD largely adopting staff's recommendations assumes all microgrids will be developed for compensation. But what if that is not the objective of the endeavor and "own use" is? That is what this white paper explores.

b) "Own Use" Exemption Applied to Microgrids.

PU Code section 218(a) excludes from the definition of "electrical corporation" electricity that is "generated on or distributed by the producer through private property solely for its *own use* or the use of its tenants and not for sale or transmission to others." (Emphasis added).¹⁰ The language of section 218(a) has been in existence for decades, yet its contours have never really been defined beyond a single premise generating and using its own electricity. That is the status quo that currently allows individuals to self-provide power by way of a backup generator or, more recently, the addition of rooftop solar panels. Add a battery to the mix and one has a microgrid.

Unaddressed in the Microgrid PD is whether the law accommodates not just one homeowner but several who, through common effort, perhaps through a homeowners' association (HOA), pool their resources to purchase, install and operate what would be under the law "an electric plant" to generate, store and deliver electricity for their collective "own use." Shouldn't this also fall within the "own use" exemption?

Nothing in Section 218 would seem to preclude this. Indeed, the provision in the statute recognizing a parallel 'tenants' use' exception supports the view that the Commission's jurisdictional reach was not intended to limit generation and power delivery to single premises but can instead be to a potentially a large number of residences on a single property. Should it matter that, instead of being arranged on a single property, the premises are arrayed on a series of contiguous adjacent properties along a city-block? Equally, what features of a landlord-tenant relationship warrant exception from the Commission's jurisdictional reach that is different as a practical matter from a HOA-type arrangement? In a nutshell, did the legislature really intend to

3-4); also see, *In Re Future Net, Inc.* (Aug. 6, 1998) 81 CPUC 2d 692: "Traditionally, this Commission has had jurisdiction over 'every corporation or person involved in or facilitating the production, generation, transmission, delivery, or furnishing of electricity.' (Pub. Util. Code, §§ 216, 217, 218.)."

⁹ Staff Proposal for Facilitating the Commercialization of Microgrids Pursuant to Senate Bill 1339 (July 23, 2020) (Concept Paper) at p.39, *available at* <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M344/K038/344038386.PDF>.

¹⁰ The legislature saw fit to say this not once but twice in section 218. Thus, P.U. Code § 218(b)(1) provides that an electrical corporation does not include any party that produces party from other than a conventional power source for "its own use or the use of its tenants."

limit “own use” to single premises when plainly the “own use” exemption can be applicable to multiple premises?

To date, the Commission has not addressed these questions. In its Concept Paper, Commission Staff leaves an unwarranted impression that policy concerns warrant application of the limitations on over-the-fence transactions that are a necessary element of all microgrids involving more than one premises, including EcoBlock.¹¹ It says the following:

PUC 218 serves an important public purpose, in assuring fair and reasonable rates, safe and reliable electricity available to all. Public utilities are responsible for safety, reliability and interconnections to the larger grid; thus, consideration must be given to utilities’ grid responsibilities, control, operation and maintenance of their distribution infrastructure, and transparency of microgrid operations that may affect grid operations.

If energy exchange were to be allowed between more than 3 contiguous property owners or that cross a public street, an important concern to address is the administration of fair and reasonable rates between microgrid participants, equitable distribution of costs and charges as well as potential cost-shifting concerns between microgrid and non-microgrid participants. If energy exchange becomes allowed behind the point of interconnection, but is not subject to regulatory oversight, private control over basic necessities such as power means that these private firms could effectively subordinate, dominate, and exploit ordinary users.

This raises important questions, such as:

- how to ensure reliable service for customers served by the microgrid;
- do customers have the option to opt out of a microgrid project that may increase costs on their utility bills;
- is there any protection for “customers” of microgrids to ensure they are not paying excessive costs for the microgrid services;
- do third-party operated microgrids increase wildfire ignition risks;
- who is liable for any damage caused by the electric distribution system when a third-party is operating the microgrid?¹²

Similarly, in the Microgrid PD, the draft decision describes the Commission’s statutory obligation to develop tariffs that commercialize microgrids “without shifting costs between ratepayers.”¹³

¹¹ Section 218(b)(2) provides an exception to the Commission’s jurisdiction over electrical corporations. Commonly referred to as the “over-the-fence” rule, this subsection excepts from the definition of “electrical corporation” a corporation or person that uses or sells power to not more than two other immediately adjacent properties without an intervening public street.

¹² Concept Paper at 41 (internal quotation citation omitted).

¹³ Proposed Decision at 30-31.

While these policy considerations are undoubtedly important, they are not contained in section 218. And, as suggested above, the Commission should not assume the issues addressed by the over-the-fence rule are necessarily implicated in every microgrid structure. A microgrid structured as an HOA, for example, may well fit within the “own use” exemption and would not trip the “over the fence sale” expressly a part of the statute because there would be “no sale” under this model. And, with regard to the Commission’s policy concerns on safety and reliability, these issues could be addressed through the HOA microgrid’s organizing documents and/or some level of regulatory oversight, *e.g.*, building codes, etc.

That is the model EcoBlock seeks to develop on the ground. The HOA would own, operate, and manage some or all of the electric facilities used to generate, store, and distribute pooled energy resources to the homeowners (who are the owners of the HOA assets). They would be responsible for the operational costs of the HOA and they would reap the benefits from such ownership.

As with all Distributed Energy Resources, the interconnection of microgrid assets with the distribution grid is of course subject to technical standards and analysis conducted by the utility. Furthermore, a microgrid designed cooperatively between the HOA and the utility may well involve the use of utility-owned and utility-operated distribution wires, transformers, or switchgear. Crucially, however, the Public Utilities Code should not foreclose the option for the HOA to own and operate specific assets within a microgrid, including those that may physically cross multiple property boundaries.

Plainly there are questions about what application of a new arrangement would be to long existing law, but it is not as novel as one might think. Although relatively few in number, there are multiple local distribution systems owned and operated by HOAs in the state. These systems are connected to the distribution systems of the major investor-owned utilities and do so without any Commission regulatory oversight, no doubt because they are not dedicated to public use, which is a necessary prerequisite for Commission jurisdiction.¹⁴ That is equally true for EcoBlock, which would not be holding itself out to the general public but rather be limited to the homeowners.

¹⁴ Appellate precedent establishes that for an entity to be subject to Commission regulation as a public utility, it must not only satisfy the express definition of the Constitution and P.U. Code, but must also meet an implicit prerequisite that it has dedicated its property to public use. *Richfield Oil Corp. v. Public Utilities Commission* (1960) 54 Cal.2d 419, 431 (“*Richfield Oil*”); *In Re SoCal Edison Co.* (Aug. 19, 1980) 4 CPUC 2d 195 (“[t]he only limitation on the broad language contained in Sections 216, 217, 218, [] is the prerequisite that property must be dedicated to public use before it is subject to public utility regulation by this Commission.”) The test has been articulated “as whether or not those offering the service have expressly or impliedly held themselves out as engaging in the business of supplying the [utility service] to the public as a class,” even a limited portion of it, “as contradistinguished from holding [themselves] out as serving or ready to serve only particular individuals, either as a matter of accommodation or for other reasons peculiar and particular to them.” *Yucaipa Water Co. No. 1 v. Public Utilities Commission* (1960) 54 Cal.2d 823, 827–828; *see also Independent Energy Producers Assn., Inc. v. State Bd. of Equalization* (2004) 125 Cal.App.4th 425, 443 (the essential feature of a public use is that it is “not confined to privileged individuals, but is open to the indefinite public. It is this indefiniteness or unrestricted quality that gives it its public character.”)

There might also be questions as to where the “own use” HOA microgrid construct ends and the “electrical cooperative” model begins. P.U. Code § 2776 defines an “electrical cooperative” as “any private corporation or association organized for the purposes of transmitting or distributing electricity exclusively to its stockholders or members at cost.” In its Concept Paper, Commission Staff takes up this issue, noting, “[c]ommunity microgrids (microgrids that provide energy resources for more than one property owner, not necessarily contiguous) could form an electrical cooperative.”¹⁵ The Microgrid PD, however, declined to take up the issue of “community microgrids,” instead reserving the issue for the next track of the proceeding.

In the meantime, however, projects like EcoBlock, funded with ratepayer-funded EPIC money, are left in something of a legal limbo by a Microgrid PD that says nothing of the viability of the existing and longstanding “own use” doctrine. This could have the effect of slowing down, and potentially impeding, valuable research efforts that could help better define worthwhile policy models and shape microgrid development approaches going forward.

These are weighty issues worthy of the Commission’s consideration going forward. They help to ensure that California makes the best use of its EPIC resources and continues to play the leading role that it has long held on issues of national and global importance as it relates to the development of energy policy.

The importance of this effort is all the more clear when the issues before the Commission touch upon fundamental and long-established legal principles with regard to the right to self-provide electric service. As the Commission notes in the Microgrid PD, “[s]ection 218 is a statute in the California Public Utilities Code” which “the Commission has no authority to change or modify.”¹⁶ That is most certainly true with regard to the “own use” exemption. By its silence on the issue, however, the Commission leaves a misimpression that “own use” has no application in the microgrid context, when there is ample reason for a contrary conclusion. If this misimpression is allowed to stand un rebutted, it may inadvertently impede the full extent of microgrid development permitted by Section 218. That should not happen.

¹⁵ Concept Paper at 42-43.

¹⁶ Microgrid PD at 30.