

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

In the Matter of

PUBLIC UTILITIES COMMISSION

Instituting a Proceeding to
Investigate Establishment of a
Microgrid Services Tariff

DOCKET NO. 2018-0163

SUPPLEMENTAL REPLY BRIEF

BY

MICROGRID RESOURCES COALITION

and

CERTIFICATE OF SERVICE

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TO THE HONORABLE PUBLIC UTILITIES COMMISSION OF THE STATE OF
HAWAII:

The Microgrid Resources Coalition (“MRC”) hereby respectfully submits its Supplemental Reply Brief to the Public Utilities Commission of the State of Hawaii (the “Commission”), pursuant to the Commission’s Order No. 35884, filed November 21, 2018 (“Order No. 35884”), as supplemented by its subsequent Order No. 36106, filed January 22, 2019 (“Order No. 36106”), in this proceeding to investigate establishment of a microgrid services tariff for Hawaiian Electric Company, Inc. (“HECO”), Hawai‘i Electric Light Company, Inc. (“HELCO”), and Maui Electric Company, Limited (“MECO”) (collectively, the “HECO Companies”) pursuant to Act 200.¹

I. Introduction

¹ House Bill 2110, H.D. 2, S.D. 2, 29th Leg. Reg. Sess. (2018), was signed by the Governor and assigned Act 200 on July 10, 2018 (“Act 200”) and is codified in Haw. Rev. Stat. (“HRS”) §269-46.

In its Order No. 35884, the Commission directed the Parties in this proceeding to focus their presentations on answering certain preliminary questions set forth in Section III.A of the Order at 25-26. Subsequently, the Commission in its Order No. 36106 in Section I.B at 2-3 provided additional guidance in answering these questions. In reviewing the Opening Brief of the HECO Companies as well as the Opening Briefs of the other Parties in this proceeding and conferring with representatives of HECO and most of the other parties, the MRC was pleased to join with several of the other parties in submitting a “Joint Reply Brief” to the Commission relating to specific dimensions of the Commission’s eight questions. We fully support that brief.

In discussing the Parties’ Opening Briefs with a representative of HECO, we were heartened to find that there were fairly few areas of substantive disagreement about the microgrid tariff called for by Act 200 as such. Our principal concerns are less with the details than with the broader effort to implement the goals of the legislature. We are pleased to file this Supplemental Reply Brief to address certain larger issues relating to the goals of Act 200 that are raised by HECO’s Opening Brief.

II. MRC Response to HECO Opening Brief

A. The Purpose of the Act

In Adopting Act 200 the Legislature articulated several key findings:

- Microgrids can facilitate the achievement of Hawaii's clean energy policies by enabling the integration of higher levels of renewable energy and advanced distributed energy resources.
- Microgrids can also provide valuable services to the public utility electricity grid, including energy storage and demand response, to support load shifting, frequency response, and voltage control, among other ancillary services.
- Microgrids can isolate themselves from the larger electricity grid in a time of emergency. . . .[T]he use of microgrids would build energy resiliency into our communities, thereby increasing public safety and security.

- [W]ithout standard terms regarding interconnection and the value of microgrid services, businesses and residents developing microgrids may choose to leave the utility grid altogether, thereby weakening the overall system and increasing costs for other utility customers.²

The microgrid tariff is intended to encourage residents and businesses to develop grid-connected microgrids so that Hawaii obtains the benefits that the legislature contemplated. The legislature directed that the tariff should eliminate “interconnection barriers and a lack of standard terms regarding the value of services exchanged between the microgrid operator and the utility”³ that discourage private initiative.

B. The Role of the HECO Companies

A microgrid tariff is a beginning. The HECO Companies must play several key roles in assuring that the tariff provides the desired incentives. The Commission can assure that those roles are carried out.

1. Prompt Interconnection. The Joint Reply Brief points out that the timeline for interconnection in HECO Rule 14H (Interconnection of Distributed Generating Facilities with the Company's Distribution System) is unduly long and vague.⁴ This is exactly what concerned the legislature. The tariff should provide shorter, more certain outcomes, and the HECO Companies should have incentives to achieve that result. The Commission is separately pursuing incentive ratemaking in Docket 2018-0088. The Commission may wish to consider a benchmark in the nature of “90 x 120,” (i.e. 90 percent of interconnection applications completed in 120 days) and provide incentive payments for meeting the benchmark and possible penalties for falling short of a minimum standard.

2. Establishing Markets for Services. Providing fair value for microgrid services was the legislature’s second major concern. Uncertainty about future revenues will have a chilling effect on private investment. The MRC understands that there are several HECO initiatives that may advance this goal outside of the microgrid tariff, including the Standard DER Tariff, its Grid Services Tariff proposals and its Integrated System Planning initiative. HECO’s

² Act 200, *supra* note 1 at §1.

³ *Id.*

⁴ Joint Reply Brief at 15-16.

description of some of these efforts was encouraging.⁵ However, as an overall matter, HECO's Opening Brief seemed to express great concern about the difficulty of meeting the requirements of the Act:

- “Indeed, no other United States jurisdiction has implemented a microgrid tariff. Therefore, compensation issues are a matter of first impression and great care must be taken to properly address many important details, ensure fairness, and avoid unintended consequences.”⁶
- “The amount of compensation that should be paid to a MGS Tariff Microgrid is a complicated matter that will require significant analyses.”⁷

The MRC hardly wishes to suggest that the implementation of tariffs should be done without careful thought, but the best way to ensure fair pricing is competitive pricing for services that HECO or the Commission determine to be needed. Regional transmission organizations (“RTOs”) under the jurisdiction of the Federal Energy Regulatory Commission (“FERC”) have been operating auction markets for energy and ancillary services for nearly 20 years. Further, while microgrid tariffs, as such, are a new phenomenon, competitive procurement processes for long term contracts in the electric industry have a much longer history. In its Opening Brief, the MRC suggested a number of approaches to tariffs and markets for grid support services.⁸ When competitive microgrids bring down the grid-wide cost of energy and ancillary services, microgrids benefit *all* customers.

3. Building out the Grid of the Future. The MRC believes that the most important role for the HECO Companies is preparing its grid to take advantage of the benefits that the legislature expects from microgrids. The grid is made more reliable when it is served by smaller, more diverse resources that reduce the size and impacts of contingencies. The grid is made more resilient when individual microgrids can serve their local communities in

⁵ HECO Opening Brief at 32.

⁶ *Id.* at 21.

⁷ *Id.* at 19-20.

⁸ MRC Opening Brief at 8-9.

emergencies⁹ and, when the grid itself is capable of being reconfigured, perhaps in larger islands to take advantage of resilient local resources. In Exhibit 4 of its Opening Brief, HECO discusses MRC member Commonwealth Edison’s Bronzeville Project, but does not emphasize the most advanced feature, which is the creation of a microgrid “cluster” through switchgear that permits two microgrids, including a privately owned and operated one, to support each other while isolated from the rest of the grid. If as the legislature expects, the grid of Hawaii’s future includes many privately operated DER including many microgrids, then HECO must have the technical capacity to “conduct the DER concert” to realize their benefits. It is really HECO’s job to ensure that microgrids benefit ALL customers as its Opening Brief suggests.¹⁰

C. Most Microgrids need a Supporter more than a Partner

While HECO seems skeptical of its ability to expedite interconnections and implement pricing for microgrid services, it appears completely confident of its ability to partner with every microgrid project:

- As recognized by the Legislature, there may be operational benefits that could be derived from a microgrid if executed in close coordination and partnership with the utility electric system.¹¹
- The utility’s involvement can vary, but experience has shown that the greater the involvement, the more likely the success for the project, the customers, and the utility.¹²

HECO offers no support for this last statement, and in the experience of MRC members, it has no basis in fact.¹³ The MRC does not mean to suggest that utilities may not make excellent partners in appropriate microgrid projects, and as indicated in its Opening Brief, it supports

⁹ MRC filing in FERC Docket No. AD18-7-000 available at: <http://www.microgridresources.com/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=e0cc66bb-8717-b886-236f-5a2b927596de&forceDialog=0>

¹⁰ HECO Opening Brief at 6.

¹¹ *Id.* The legislature supported grid *connected* microgrids.

¹² *Id.* at 4.

¹³ In general, the MRC believes that Exhibit 4 presents a narrow partial view of the mainland experience. It draws an unsupported distinction between public purpose and private purpose microgrids. While both privately and utility developed microgrids are capable of providing grid services, the principal distinction shown in HECOs examples of public purpose microgrids is that they required extensive public and ratepayer funding. HECO (in Exhibit 4 at 2) cites to a Maryland Task Force report for this distinction. See the MRC’s filing with the Maryland Public Utility Commission in docket ML#180913 for a discussion of that report, available at: <http://www.microgridresources.com/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=443ef250-16e8-fbfa-1843-eb3153775a61&forceDialog=0>

hybrid microgrid structures.¹⁴ MRC members are actively involved in such projects. However, utility microgrids are a relatively recent phenomenon. Non-utility microgrids have a long history of successful operation.¹⁵ In our experience there is more accumulated experience and more familiarity with the technology on the non-utility side than on the utility side. MRC member University of Missouri operates a microgrid that is a direct node on the Midcontinent Independent System Operator, Inc. transmission grid without the intervention of any utility.

If HECO seeks to limit microgrids to ones in which it has involvement or investment, or ones that it locates and plans, it will frustrate the intent of the legislature. Private investors will be put off, and grid defection will continue. The economic effects on non-departing customers that concern the legislature will ensue. If, on the other hand, microgrids become widespread, but some customers are left behind, there may be a role for HECO in ensuring resilience for all. If HECO actively seeks to play the roles described above, particularly investing in grid infrastructure, and if it provides support to microgrid proposals submitted to it that meet the technical requirements (i) for interconnection and (ii) for providing the grid services proposed to be provided, all with a minimum of delay, the vision of the legislature can be realized.

III. CONCLUSION

The MRC strongly believes that the development of a microgrid services tariff as mandated by Act 200 can serve the multiple goals that the legislature envisioned in Act 200. We believe that the HECO companies can play a pivotal role in meeting those objectives, and that playing that role should support the continued vitality of the HECO Companies.

Respectfully submitted on March 11, 2019.

¹⁴ MRC Opening Brief at 7.

¹⁵ MRC members Massachusetts Institute of Technology, Princeton University, University of Missouri and University of Texas at Austin own and operate long-serving microgrids. MRC members Clearway Energy and Engie own and operate microgrids for third party clients. Rob Thornton, Executive Director of MRC member International District Energy Association, estimates that its members operate over two dozen microgrids. MRC member Ictec Energy Services provides market facing software and acts as an aggregator for numerous microgrids selling services to RTO markets. All MRC members are actively engaged in the design, development and equipping of microgrids in one role or another.



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I hereby certify that I have on this date served copies of the foregoing document upon the following parties by the method of service noted below:

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