
A BILL FOR AN ACT

RELATING TO MICROGRIDS.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. The legislature finds that the development of
2 renewable microgrids can aid Hawaii's transition to a clean
3 energy economy. In this context, a microgrid is a small energy
4 network, interconnected with an electric utility grid, or
5 utilizing an electric utility grid, which is powered by
6 renewable energy, and which may be islanded from the electric
7 utility grid if needed.

8 The legislature also finds that lessons learned from the
9 recent disaster in Puerto Rico and the subsequent loss of
10 electrical grid infrastructure and months without electricity,
11 as well as lessons learned from Fukushima, Japan, and the loss
12 of critical infrastructure in tsunami and flood-prone areas,
13 must be considered in Hawaii. Further, recent reports have
14 identified increasing vulnerability in Hawaii's coastal areas to
15 sea level rise, flooding, erosion, storm surge, and tsunamis.

16 The legislature further finds that microgrids have the
17 potential to be a testing ground for greater integration of



1 renewable energy, distributed generation, storage, and demand
 2 response technology. Microgrid demonstration projects will
 3 enable the State to learn how to reduce costs, increase grid
 4 reliability and resiliency, reduce pollution and greenhouse gas
 5 emissions, reduce the cost of infrastructure, and increase the
 6 efficiency of transmission and distribution.

7 The purpose of this Act is to designate and establish
 8 requirements for a microgrid demonstration project at the
 9 natural energy laboratory of Hawaii authority that can assist in
 10 understanding, developing, and refining microgrid technologies
 11 and policies in the State.

12 SECTION 2. Chapter 269, Hawaii Revised Statutes, is
 13 amended by adding a new section to part I to be appropriately
 14 designated and to read as follows:

15 "§269- Microgrid demonstration project; natural energy
 16 laboratory of Hawaii authority. (a) The natural energy
 17 laboratory of Hawaii authority is recognized as having the
 18 potential to operate a microgrid and is endorsed by the
 19 legislature. The property controlled by the natural energy
 20 laboratory of Hawaii authority, established pursuant to chapter
 21 227D, is designated as a microgrid demonstration project. The



1 natural energy laboratory of Hawaii authority is authorized to
2 plan and design a microgrid on its property.

3 (b) The microgrid demonstration project designated by this
4 section:

- 5 (1) Shall be authorized by the public utilities
6 commission;
- 7 (2) May cross property boundaries, easements, public
8 thoroughfares, transportation rights-of-way, and
9 utility rights-of-way solely within the natural energy
10 laboratory of Hawaii authority property;
- 11 (3) May provide, sell, or transmit renewable energy to
12 tenants or other users of the natural energy
13 laboratory of Hawaii authority other than the person
14 who owns, controls, operates, or manages the natural
15 energy laboratory of Hawaii authority microgrid
16 demonstration project;
- 17 (4) May use portions of an electric public utility's
18 transmission or distribution lines to provide, sell,
19 or transmit electricity to participants in the natural
20 energy laboratory of Hawaii authority microgrid
21 demonstration project;



- 1 (5) Shall use electricity generation, located on the
2 natural energy laboratory of Hawaii authority
3 microgrid demonstration project, with a total
4 generating capacity of five megawatts or less;
- 5 (6) Shall use only renewable energy, as defined in section
6 269-91, to generate electricity, except in cases of
7 emergency; and
- 8 (7) May be islanded from the electric public utility grid
9 from time to time.
- 10 (c) Notwithstanding any other provisions in this chapter,
11 the natural energy laboratory of Hawaii authority microgrid
12 demonstration project shall be exempt from the requirements of
13 this chapter, except as may be needed to facilitate safe
14 interconnection of the natural energy laboratory of Hawaii
15 authority microgrid demonstration project to an electric public
16 utility grid. Any person who owns, controls, operates, manages,
17 or otherwise participates in the natural energy laboratory of
18 Hawaii authority microgrid demonstration project shall not be
19 considered a public utility for the purpose of participating in
20 the natural energy laboratory of Hawaii authority microgrid
21 demonstration project.



1 (d) The public utilities commission shall open a docket
2 and conduct an expedited proceeding specific to the natural
3 energy laboratory of Hawaii authority to determine how the
4 natural energy laboratory of Hawaii authority microgrid
5 demonstration project can operate on an ongoing basis as a
6 microgrid test facility in which new technology can be
7 incorporated and demonstrated as the technology evolves.

8 (e) The public utilities commission shall take any steps
9 the commission deems necessary to enable and compel electric
10 public utilities to allow the development of the natural energy
11 laboratory of Hawaii authority microgrid demonstration project
12 by non-utilities. These steps may include issuing related
13 orders, amending or adopting related rules, working with
14 permitting agencies or other authorities to grant exemptions, or
15 other steps necessary to enable the development of the natural
16 energy laboratory of Hawaii authority microgrid demonstration
17 project.

18 (f) The natural energy laboratory of Hawaii authority
19 microgrid demonstration project shall be exempt from any
20 wheeling restrictions when the wheeling is conducted within the
21 designated boundaries of the project.



1 (g) Any power that is sold by the natural energy
2 laboratory of Hawaii authority microgrid demonstration project
3 shall be at a price equal to or less than the electric utility
4 rates established by the public utilities commission.

5 (h) No later than twenty days prior to the convening of
6 the regular session of 2019, the natural energy laboratory of
7 Hawaii authority microgrid demonstration project designated
8 pursuant to subsection (a) shall submit a report to the
9 legislature of its findings and recommendations on the natural
10 energy laboratory of Hawaii authority microgrid demonstration
11 project. At a minimum, the report shall contain information on:

12 (1) The fairness of the natural energy laboratory of
13 Hawaii authority microgrid demonstration project to
14 all customers given the increased options for
15 obtaining electrical power;

16 (2) Any safety issues when operating the integrated energy
17 district;

18 (3) Reliability of the overall electrical system in
19 relation to the natural energy laboratory of Hawaii
20 authority microgrid demonstration project; and



1 (4) Any cost shifting issues realized as a result of
2 electrical energy being provided by the natural energy
3 laboratory of Hawaii authority microgrid demonstration
4 project.

5 (i) For the purposes of this section, the "natural energy
6 laboratory of Hawaii authority microgrid demonstration project"
7 means a group of interconnected loads and distributed energy
8 resources within clearly defined electrical boundaries that acts
9 as a single controllable entity with respect to the utility's
10 electrical grid and can connect to a public utility's electrical
11 grid to operate in grid-connected mode and can disconnect from
12 the grid to operate in island mode, and generates and produces
13 energy, that is solely located on property owned by the natural
14 energy laboratory of Hawaii authority."

15 SECTION 3. New statutory material is underscored.

16 SECTION 4. This Act shall take effect on July 1, 2050.



Report Title:

Renewable Energy; Microgrid Demonstration Project

Description:

Authorizes the establishment of a Natural Energy Laboratory of Hawaii Authority (NELHA) microgrid demonstration project for the generation, storage, and distribution of renewable energy on property controlled by NELHA. (HB2460 HD2)

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