

HB

1583

HD2

A BILL FOR AN ACT

RELATING TO ELECTRIC GRID RESILIENCY.

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

1 SECTION 1. The legislature finds that Hawaii's residents
2 and businesses are vulnerable to disruptions in the State's
3 energy systems caused by extreme weather events or other
4 disasters. In 2017, Puerto Rico was devastated by Hurricane
5 Maria, leaving a majority of the island's residents without
6 power for months after the storm made landfall.

7 The legislature further finds that, if a disaster of
8 similar magnitude impacted Hawaii, having some shelters equipped
9 to continue to provide backup power independent of the electric
10 grid while recovery efforts are underway will greatly increase
11 disaster preparedness.

12 In many areas of Hawaii, public school structures have also
13 served as designated shelters during hurricane warnings and
14 other disaster events. In 2016 as part of an effort to air
15 condition more schools while keeping utility bills in check, the
16 legislature created a goal for the State's public schools to
17 become net-zero in regards to energy use by the year 2035.



1 Following this, many schools have begun to install renewable
2 energy systems in order to meet this goal. However, the
3 department of education has no directive or incentive to install
4 systems that are sized or designed to both meet the daily
5 electricity needs of a school during normal operations, and to
6 function as a backup power system for a disaster shelter that
7 can operate independently from the grid at times. Although
8 there is an additional cost associated with the installation of
9 such a system, it would also provide value to the utility and
10 its customers by increasing disaster preparedness and by
11 providing ancillary services to the grid during regular
12 operations.

13 Therefore, the legislature finds that it will be beneficial
14 to create incentives for the department of education to invest
15 in such systems, and to encourage the public utilities
16 commission to consider allowing an interconnection agreement
17 with the utility that credits or refunds schools for the grid
18 services provided to help cover the additional cost of
19 installing systems specifically designed to offer grid services
20 to the grid, whether in the form of ancillary services or more
21 broadly supporting public resilience.



1 Accordingly, the purpose of this Act is to:

2 (1) Require the department of education to establish a
3 pilot program in which various schools are provided
4 with renewable energy systems that are capable of
5 providing backup power in the event of a natural
6 disaster or other similar emergency; and

7 (2) Require the public utilities commission to consider
8 ways to incentivize the installation in public schools
9 of renewable energy systems that can provide backup
10 power in the event the broader electric grid cannot
11 provide power.

12 SECTION 2. Section 302A-1510, Hawaii Revised Statutes, is
13 amended to read as follows:

14 "[+]§302A-1510[+] **Sustainable schools initiative.** (a)

15 The department shall establish a goal of becoming net-zero with
16 respect to energy use, producing as much renewable energy as the
17 department consumes across all public school facilities, by
18 January 1, 2035.

19 (b) The department shall use the amount and value of
20 energy consumed by the department across all public school
21 facilities during the 2015-2016 fiscal year as the benchmark for



1 measuring the department's progress toward the energy usage goal
2 set forth in subsection (a).

3 (c) The department shall submit an annual report that
4 shall include information on:

5 (1) The overall progress toward the net-zero energy goal
6 set forth in subsection (a);

7 (2) Its plans and recommendations to advance the net-zero
8 energy goal set forth in subsection (a); and

9 (3) Any challenges or barriers encountered or anticipated
10 by the department in meeting the net-zero energy goal
11 set forth in subsection (a).

12 (d) The department shall expedite the cooling of all
13 public school classrooms to a temperature acceptable for student
14 learning. When implementing classroom cooling measures, the
15 department, and any contractor hired to implement classroom
16 cooling measures, shall maximize energy efficiency and
17 installation and operating cost savings over the entire life of
18 the project.

19 (e) Pursuant to this section, the department shall include
20 in the report the status of the implementation of measures taken



1 to cool public school classrooms as required by subsection (d).

2 The report shall include the following information:

3 (1) The number of completed classrooms in which cooling
4 measures were implemented and the number of classrooms
5 remaining that require cooling;

6 (2) The different types of cooling measures implemented;

7 (3) The approximate cost per classroom for planned cooling
8 measures, including installation, upgrades, equipment,
9 maintenance, and projected operating costs over the
10 life of the installed cooling measures;

11 (4) The approximate cost per completed classroom for
12 cooling measures implemented, including installation,
13 upgrades, equipment, maintenance, and projected
14 operating costs over the life of the installed cooling
15 measures;

16 (5) The number of completed classrooms in which energy
17 efficiency measures were installed or implemented and
18 the number of classrooms remaining that require energy
19 efficiency measures; and

20 (6) The different types of energy efficiency measures
21 installed or implemented.



1 (f) The department shall establish and implement a pilot
2 program in at least four schools in which the schools are
3 provided with renewable energy systems that are capable of
4 continuously providing backup electrical power, to be sourced
5 from renewable energy, in the event that the electric grid
6 cannot provide power. The department shall select schools that
7 are likely to be designated as emergency shelters in the event
8 of a natural disaster. In selecting the renewable energy
9 systems, the department shall consider, among other things, a
10 system's capacity for generating and providing energy to the
11 electric grid over the lifetime of the system.

12 (g) The department shall report its findings and
13 recommendations, including any proposed legislation, to the
14 legislature no later than twenty days prior to the convening of
15 each regular session."

16 SECTION 3. The public utilities commission shall consider
17 ways to incentivize the installation in public schools of
18 renewable energy systems that can provide backup power in the
19 event the broader electric grid cannot provide power in its
20 current and ongoing proceedings.



1 SECTION 4. Statutory material to be repealed is bracketed
2 and stricken. New statutory material is underscored.

3 SECTION 5. This Act shall take effect on July 1, 2050.



Report Title:

DOE; PUC; Electric Grid; Renewable Energy; Sustainable Schools Initiative

Description:

Requires the Department of Education to establish a pilot program in 4 schools to install renewable energy systems capable of providing backup power in the event of a natural disaster or other similar emergency. Requires the Public Utilities Commission to consider in its current and ongoing proceedings ways to incentivize the implementation of renewable energy systems in public schools. (HB1583 HD2)

The summary description of legislation appearing on this page is for informational purposes only and is not legislation or evidence of legislative intent.



TESTIMONY OF
JAMES P. GRIFFIN, Ph.D.
CHAIR, PUBLIC UTILITIES COMMISSION
STATE OF HAWAII

TO THE
HOUSE COMMITTEE ON
CONSUMER PROTECTION & COMMERCE

February 20, 2019
2:00 p.m.

Chair Takumi and Members of the Committee:

MEASURE: H.B. No. 1583 HD2

TITLE: RELATING TO ELECTRIC GRID RESILIENCY.

DESCRIPTION: Requires the Department of Education to establish a pilot program in 4 schools to install renewable energy systems capable of providing backup power in the event of a natural disaster or other similar emergency. Requires the Public Utilities Commission to consider in its current and ongoing proceedings ways to incentivize the implementation of renewable energy systems in public schools. (HB1583 HD2)

POSITION:

The Public Utilities Commission offers the following comments for consideration.

COMMENTS:

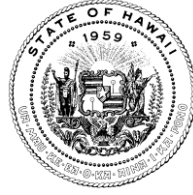
The Public Utilities Commission (“Commission”) supports the intent of this bill to increase the resilience of the state in the face of natural disasters and other emergencies. The Commission is currently working with the state’s electric utilities and other key stakeholders in several related proceedings to address this issue, including the Hawaiian Electric Companies’ integrated grid planning (“IGP”) process (see Docket No. 2018-0165), the development of a microgrid services tariff (see Docket No. 2018-0163), and the establishment of performance-based regulatory mechanisms (“PBR”) for resilience (see Docket No. 2018-0088).

The Commission is also working closely with the Public Benefits Fee Administrator (“Hawaii Energy”) to design new programs and services funded by the Public Benefits Fee (“PBF”), including program offerings and incentives related to resilience (see Docket

No. 2007-0323). Hawaii Energy is currently developing a program plan covering the next three years (i.e., through 2021), which will be submitted for public review and comment in May 2019.

With respect to the requirement that the Commission consider, in current and ongoing proceedings, ways to incentivize these systems, the Commission is appreciative of Legislative guidance on this matter, and will continue to develop appropriate resilience programs and incentives through currently open and active proceedings, including the IGP, microgrid, PBR, and PBF dockets identified above.

Thank you for the opportunity to testify on this measure.



DAVID Y. IGE
GOVERNOR

JOSH GREEN
LT. GOVERNOR

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DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS**

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Testimony of the Department of Commerce and Consumer Affairs

**Before the
House Committee on Consumer Protection and Commerce
Tuesday, February 20, 2019
2:00 p.m.
State Capitol, Conference Room 329**

**On the following measure:
H.B. 1583, H.D. 2, RELATING TO ELECTRIC GRID RESILIENCY**

Chair Takumi and Members of the Committee:

My name is Dean Nishina, and I am the Executive Director of the Department of Commerce and Consumer Affairs' (Department) Division of Consumer Advocacy. The Department offers comments on this bill.

The purpose of this bill is to require the Department of Education to establish a pilot program in which various schools are provided with renewable energy systems that are capable of providing backup power in the event of a natural disaster or other similar emergency. The measure also requires the Public Utilities Commission (Commission) to consider ways to incentivize the implementation of these systems. The effective date of this measure has been changed to July 1, 2050.

The need for Hawaii to evaluate its existing electric grids and their ability to withstand a natural disaster or similar emergency is clear. The ability of a microgrid or a distributed energy system to provide possible solutions is one reason why the Commission has opened Docket No. 2018-0163, which is investigating the

establishment of a microgrid tariff. The role that microgrids and distributed systems can play in addressing emergency situations are also being considered in the Integrated Grid Planning proceedings. In addition, the appropriate pricing for services to the grid by distributed energy systems and/or microgrids will be a major focal point in the market track phase in the distributed energy systems proceeding, Docket No. 2014-0192.

Furthermore, in Docket No. 2018-0088, the Commission is investigating Performance Based Regulation, and the Department and others have recommended that resiliency must be included in any Performance Based Regulation framework. In addition, in Docket No. 2018-0165, the Commission will be reviewing the Integrated Grid Planning process and results that will certainly evaluate the role of microgrids in Hawaii's electric grids.

Thus, the Department appreciates the Legislature's recognition reflected in H.D. 2 that certain ongoing Commission proceedings will address the concerns raised in this measure, as well as the guidance that the Commission should consider ways to encourage the installation of renewable energy systems in public schools to provide backup power if the electric grid is unavailable.

The Department also respectfully raises a possible affordability issue – namely, a renewable energy system that provides continuous backup power for a prolonged or an indefinite time would be very expensive. Accordingly, rather than require “continuous” backup power, it may be reasonable for the Committee to consider some flexibility that allows the evaluation of possible systems that might be designed and the related costs.

Thank you for the opportunity to testify on this bill.

HB-1583-HD-2

Submitted on: 2/19/2019 1:25:37 PM

Testimony for CPC on 2/20/2019 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
HERBERT M. "TIM" RICHARDS, III	Hawaii County Council	Support	No

Comments:



STATE OF HAWAII
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAII 96804

Date: 02/20/2019

Time: 02:00 PM

Location: 329

Committee: House Consumer Protection &
Commerce

Department: Education

Person Testifying: Dr. Christina M. Kishimoto, Superintendent of Education

Title of Bill: HB 1583, HD2 RELATING TO ELECTRIC GRID RESILIENCY.

Purpose of Bill: Requires the Department of Education to establish a pilot program in 4 schools to install renewable energy systems capable of providing backup power in the event of a natural disaster or other similar emergency. Requires the Public Utilities Commission to consider in its current and ongoing proceedings ways to incentivize the implementation of renewable energy systems in public schools. (HB1583 HD2)

Department's Position:

The Hawaii State Department of Education (Department) provides the following comments on HB 1583, HD2.

The Department will complete a pilot project at 3633 Waialae Avenue by the end of March 2019. The pilot project seeks to determine the feasibility and economic viability of solar renewable energy, battery backup, and diesel fuel generator system at a Department facility.

Following analysis and testing of this pilot project, the Department will be able to report to the Legislature on the lessons learned from this microgrid pilot project.

This pilot program was funded by energy efficiency savings accrued in the past three years, pursuant to Section 36-41, Hawaii Revised Statutes. The Department estimates funding for an additional pilot requires approximately \$3 million per site to implement. As a result, additional pilots for four schools will require \$12 million in funding.

Moreover, to ensure backup electrical power past a few hours requires either diesel fuel or natural gas generators. Battery backup cannot provide continuous backup electrical power for designated emergency shelters. For this reason, the current Department pilot uses a diesel generator for backup of critical systems.

Thank you for the opportunity to provide testimony on this measure.

The Hawaii State Department of Education seeks to advance the goals of the Strategic Plan which is focused on student success, staff success, and successful systems of support. This is achieved through targeted work around three impact strategies: school design, student voice, and teacher collaboration. Detailed information is available at www.hawaiipublicschools.org.