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## 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 in September 2017,  
2   Hurricanes Irma and Maria struck Puerto Rico with devastating  
3   force, causing an estimated \$95,000,000,000 in damages to the  
4   island, including extensive damages to the island's electrical  
5   infrastructure. Recent estimates predict that power in Puerto  
6   Rico will not be fully restored until spring of 2018, thus  
7   leaving some residents without power for half a year. The  
8   prolonged lack of electrical power has left the residents of  
9   Puerto Rico without essential services and has created a  
10   humanitarian crisis.

11           The legislature further finds that a direct hit on Oahu  
12   from a similar category five hurricane will almost certainly  
13   cause extensive property damage and extended power outages  
14   across the island. Moreover, much of the State's energy-  
15   generating infrastructure is susceptible to storm surges due to  
16   the structures being located at or near the coastline. The  
17   Hawaii emergency management agency estimates that under a best-



1 case scenario, it would take at least fourteen days after  
2 landfall of a category four hurricane on Oahu to restore eighty  
3 per cent of grid power. Most public emergency shelters in the  
4 State do not have the capacity to provide two weeks of  
5 electrical service and relief from the mainland is dependent  
6 upon a functioning airport and seaport. Furthermore, the risks  
7 of a natural disaster increase with the impacts of climate  
8 change. Scientists have described 2017 as the most weather  
9 destructive year on record and opined that the number of extreme  
10 weather events will continue to increase.

11 The legislature hereby declares that it shall be the policy  
12 of the State to ensure that the State is prepared to withstand  
13 natural disasters and other emergencies by making investments in  
14 grid resiliency to protect the State's critical infrastructure  
15 and its citizens. The goals of this policy are: to prevent or  
16 reduce the severity of damage to the electric grid from a  
17 natural disaster or state of emergency; enable faster recovery  
18 of normal grid operations after a grid outage due to a natural  
19 disaster or state of emergency; and maintain critical loads at  
20 critical infrastructure such as hospitals, fire stations, police



1 stations, airports, and seaports during a grid outage due to a  
2 natural disaster or state of emergency.

3 The purpose of this Act is to:

- 4 (1) Establish programs and designate funds that shall  
5 provide immediate, emergency funding for the  
6 development of energy facilities at critical  
7 infrastructure;
- 8 (2) Create a grid resiliency task force to identify  
9 critical infrastructure needs and provide  
10 recommendations for enhancing grid resiliency  
11 throughout the State;
- 12 (3) Direct government agencies to begin building grid  
13 resiliency into their planning; and
- 14 (4) Direct public utilities to incorporate grid resiliency  
15 planning into their integrated resource and grid  
16 modernization planning.

17 SECTION 2. Chapter 196, Hawaii Revised Statutes, is  
18 amended by adding four new sections to part III to be  
19 appropriately designated and to read as follows:

20 **"§196-A Grid resiliency capital investment program. (a)**

21 There is established a grid resiliency capital investment



1 program that shall be administered by the department of  
2 business, economic development, and tourism.

3 (b) In administering the grid resiliency capital  
4 investment program, the department shall:

5 (1) After adopting or modifying the recommendations of the  
6 grid resiliency task force established pursuant to  
7 section 269-C, expend moneys from the grid resiliency  
8 capital investment special fund established pursuant  
9 to section 196-B to fund rebates for the purchase and  
10 installation of critical infrastructure in accordance  
11 with this section;

12 (2) Prepare forms necessary for a resiliency facility  
13 owner to claim a rebate under subsection (d);

14 (3) At regular intervals and within reasonable periods of  
15 time, post the balance of the funds remaining in the  
16 grid resiliency capital investment special fund  
17 established in section 196-B on its website; and

18 (4) Adopt rules, without regard to chapter 91, necessary  
19 to effectuate the purposes of this section.

20 (c) In administering the grid resiliency capital  
21 investment program, the department of business, economic



1 development, and tourism may, without regard to chapter 103D,  
2 contract with a third party for services to assist with the  
3 administration of the program.

4 (d) A resiliency facility owner that:

5 (1) Leases an eligible resiliency facility to a resiliency  
6 facility user; or

7 (2) Purchases and installs an eligible resiliency facility  
8 in the State,

9 may apply for a one-time rebate per eligible resiliency facility  
10 under this section; provided that the rebate shall only be  
11 available for eligible resiliency facilities placed into service  
12 after June 30, , and before July 1, .

13 (e) A resiliency facility owner shall be entitled to  
14 receive a rebate equal to per cent of the qualified  
15 resiliency facility costs of each eligible resiliency facility.

16 (f) Nothing in this section shall alter taxes due on the  
17 original purchase price of an eligible resiliency facility prior  
18 to the application of this rebate. Any rebate received pursuant  
19 to the grid resiliency capital investment program shall not be  
20 considered income for the purposes of state or county taxes.



1            **§196-B Grid resiliency capital investment special fund.**

2            There is established a grid resiliency capital investment  
3            special fund within the treasury of the State into which shall  
4            be deposited appropriations made by the legislature into the  
5            fund. Moneys from the fund shall be used to fund rebates for  
6            the purchase and installation of critical infrastructure in  
7            accordance with section 196-A.

8            **§196-C Grid resiliency task force; membership.**    (a)    A

9            grid resiliency task force is established within the department  
10           of business, economic development, and tourism for  
11           administrative purposes.

12           (b)    The task force shall comprise the following members or  
13           their designees:

14           (1)    The governor, who shall serve as the chair;

15           (2)    The head of each principal department;

16           (3)    The administrator of the Hawaii emergency management  
17           agency;

18           (4)    The chief justice;

19           (5)    The chairperson of the board of trustees of the office  
20           of Hawaiian affairs;

21           (6)    The president of the senate; and



1        (7) The speaker of the house of representatives.

2        **§196-D Grid resiliency task force; duties.**    (a) The grid  
3 resiliency task force shall:

4        (1) Analyze grid resiliency incentive programs, including  
5        the California small generator incentive program, and  
6        recommend aspects of those programs that should be  
7        adopted by the State; and

8        (2) Identify critical infrastructure and provide  
9        recommendations regarding the:

10       (A) Amounts of any emergency spending necessary for  
11       the grid resiliency capital investment program  
12       established in section 196-A; and

13       (B) Amounts of spending necessary for the grid  
14       resiliency rebate program established in section  
15       269-A.

16       (b) The task force may hire a consultant to assist the  
17 task force in performing its duties.

18       (c) No later than twenty days prior to the convening of  
19 the 2020 regular session, the task force shall submit a report  
20 to the legislature. The report shall include the  
21 recommendations required under subsection (a) (2) (A).



1        (d) No later than twenty days prior to the convening of  
2 the 2021 regular session, the task force shall submit a report  
3 to the legislature. The report shall include:

4        (1) A description of the activities of the task force for  
5 the previous fiscal year;

6        (2) Recommendations, including, if necessary, amendment to  
7 those recommendations made pursuant to subsection (c);  
8 and

9        (3) Recommended legislation, if any."

10       SECTION 3. Chapter 269, Hawaii Revised Statutes, is  
11 amended by adding two new sections to part I to be appropriately  
12 designated and to read as follows:

13        **"§269-A Grid resiliency rebate program.** (a) There is  
14 established a grid resiliency rebate program that shall be  
15 administered by the commission.

16        (b) In administering the grid resiliency rebate program,  
17 the commission shall:

18        (1) After adopting or modifying the recommendations of the  
19 grid resiliency task force established pursuant to  
20 section 269-C, expend moneys from the grid resiliency  
21 rebate special fund established pursuant to section





- 1           269-B to fund rebates for the purchase and  
2           installation of eligible resiliency facilities in  
3           accordance with this section;
- 4           (2) Prepare forms necessary for a resiliency facility  
5           owner to claim a rebate under subsection (c);
- 6           (3) At regular intervals and within reasonable periods of  
7           time, post the amounts remaining in the grid  
8           resiliency rebate special fund established in section  
9           269-B on its website;
- 10          (4) Administer the grid resiliency rebate program in a  
11          manner to ensure that critical infrastructure  
12          throughout the State has sufficient grid resiliency  
13          facilities to maintain critical loads; and
- 14          (5) Adopt rules, without regard to chapter 91, necessary  
15          to effectuate the purposes of this section.
- 16          (c) A resiliency facility owner that:
- 17          (1) Leases an eligible resiliency facility to a resiliency  
18          facility user; or
- 19          (2) Purchases and installs an eligible resiliency facility  
20          in the State,



1 may apply to the commission, within six months of the eligible  
2 resiliency facility being first placed in service, to claim a  
3 one-time rebate per eligible resiliency facility under this  
4 section; provided that the rebate shall be made available for  
5 eligible resiliency facilities first placed in service after  
6 June 30, 2019.

7 (d) A resiliency facility owner shall be entitled to  
8 receive a rebate of no more than per cent of the qualified  
9 resiliency facility costs for each eligible resiliency facility.

10 (e) Nothing in this section shall alter taxes due on the  
11 original purchase price of an eligible resiliency facility prior  
12 to the application of this rebate. Any rebate received pursuant  
13 to the grid resiliency rebate program shall not be considered  
14 income for the purposes of state or county taxes.

15 **§269-B Grid resiliency rebate special fund.** There is  
16 established a grid resiliency rebate special fund within the  
17 treasury of the State into which shall be deposited:

- 18 (1) Appropriations made by the legislature into the fund;  
19 and  
20 (2) The public benefits fee collected pursuant to section  
21 269-121.



1 Moneys from the fund shall be used to fund rebates in accordance  
2 with section 269-A."

3 SECTION 4. Section 196-2, Hawaii Revised Statutes, is  
4 amended by adding ten new definitions to be appropriately  
5 inserted and to read as follows:

6 "Battery storage device" means an identifiable facility,  
7 equipment, or apparatus that:

- 8 (1) Is electrically connected to a resiliency facility  
9 user's critical load and paired with a new or existing  
10 renewable generation system;
- 11 (2) Stores electricity from its paired renewable  
12 generation system via a chemical or mechanical  
13 process;
- 14 (3) Delivers stored energy at a later time to the  
15 resiliency facility user, an electric utility, or the  
16 Hawaii electric system; and
- 17 (4) Has a storage capacity capable of supplying:
- 18 (A) A critical infrastructure's critical load for a  
19 minimum of twenty-four hours; or
- 20 (B) The total of a critical infrastructure's average  
21 daily usage for a minimum of five hours.



1       "Critical infrastructure" means a police station, fire  
2 station, hospital, nursing home, designated emergency shelter,  
3 the primary residences of first responders, and other critical  
4 infrastructure that may be designated by the governor pursuant  
5 to the recommendations of the grid resiliency task force, or by  
6 the governor or other authorized official pursuant to a natural  
7 disaster or state of emergency designation.

8       "Critical load" means the minimum load necessary for any  
9 critical infrastructure to perform its essential functions  
10 during a natural disaster or state of emergency.

11       "Designated emergency shelter" means any building owned by  
12 the State, a county, or a municipal government agency that has  
13 been designated by appropriate authorities as a place of  
14 community refuge made available to provide temporary shelter and  
15 housing to citizens during any natural disaster or state of  
16 emergency as declared by the governor or other authorized  
17 official.

18       "Eligible resiliency facility" means a battery storage  
19 device paired with an electric generation system powered by  
20 renewable energy that is:



- 1        (1) Installed on the property where critical  
2        infrastructure is located or on property contiguous to  
3        the property where critical infrastructure is located  
4        without regard to interruptions in contiguity caused  
5        by easements, public thoroughfares, transportation  
6        rights-of-way, and utility rights-of-way; provided  
7        that the contiguous property is owned or leased by the  
8        same person or entity that owns or leases the property  
9        where the critical infrastructure is located;
- 10       (2) Sized to power at least fifty per cent but not more  
11       than one hundred per cent of the critical  
12       infrastructure's annual electrical requirements;
- 13       (3) Is capable of isolating from the electric grid and  
14       operating independently during periods of electrical  
15       outages; and
- 16       (4) Is not owned by an electric utility.
- 17       "First responder" means a firefighter, police officer,  
18       paramedic or individual who is employed by any federal, state,  
19       county, or municipal agency, or employed by a private company  
20       contracted by any federal, state, county, or municipal agency,  
21       that ordinarily provides emergency services to citizens of this



1 State during a natural disaster or state of emergency as  
2 declared by state or federal authorities.

3 "Grid resiliency" means the installation and operation of  
4 electrical equipment that:

5 (1) Prevents or reduces the severity of damage to the  
6 electric grid from a natural disaster or state of  
7 emergency;

8 (2) Enables faster recovery of normal grid operations  
9 after a grid outage due to a natural disaster or state  
10 of emergency; and

11 (3) Maintains critical loads at critical infrastructure  
12 during a grid outage due to a natural disaster or  
13 state of emergency.

14 "Qualified resiliency facility cost" means those  
15 expenditures made for the purchase and installation of an  
16 eligible resiliency facility. Expenditures made for the  
17 purchase and installation of a battery storage device that is  
18 paired with an existing renewable generation system is a  
19 qualified resiliency facility cost.

20 "Resiliency facility owner" means the person, individual,  
21 partnership, corporation, association, or public or private



1 organization that holds legal title to an eligible resiliency  
2 facility.

3 "Resiliency facility user" means the real property owner,  
4 or the real property owner's lessees or tenants, that use the  
5 energy discharged from an eligible resiliency facility."

6 SECTION 5. Section 269-1, Hawaii Revised Statutes, is  
7 amended by adding eight new definitions to be appropriately  
8 inserted and to read as follows:

9 "Critical infrastructure" shall have the same meaning as  
10 defined in section 196-2.

11 "Critical load" shall have the same meaning as defined in  
12 section 196-2.

13 "Eligible resiliency facility" shall have the same meaning  
14 as defined in section 196-2.

15 "First placed in service" has the same meaning as title 26  
16 Code of Federal Regulations section 1.167(a)-11(e)(1).

17 "Grid resiliency" shall have the same meaning as defined in  
18 section 196-2.

19 "Qualified resiliency facility cost" shall have the same  
20 meaning as defined in section 196-2.



1        "Resiliency facility owner" shall have the same meaning as  
2 defined in section 196-2.

3        "Resiliency facility user" shall have the same meaning as  
4 defined in section 196-2."

5        SECTION 6. Section 269-121, Hawaii Revised Statutes, is  
6 amended by amending subsection (b) to read as follows:

7        "(b) The public benefits fee shall be used to support  
8 clean energy technology, demand response technology, grid  
9 resiliency, and energy use reduction, and demand-side management  
10 infrastructure, programs, and services, subject to the review  
11 and approval of the public utilities commission. Of the  
12 revenues collected pursuant to this section, \$            shall be  
13 allocated to the grid resiliency rebate special fund established  
14 pursuant to section 269-B. The public benefits fee shall be set  
15 at a level sufficient to meet the allocation to the grid  
16 resiliency rebate special fund required by this section. These  
17 moneys shall not be available to meet any current or past  
18 general obligations of the State; provided that the State may  
19 participate in any clean energy technology, demand response  
20 technology, or energy use reduction, and demand-side management





1 infrastructure, programs, and services on the same basis as any  
2 other electric consumer.

3 For the purpose of this subsection, "clean energy  
4 technology" means any commercially available technology that  
5 enables the State to meet the renewable portfolio standards,  
6 established pursuant to section 269-92, or the energy-efficiency  
7 portfolio standards, established pursuant to section 269-96, and  
8 approved by the public utilities commission by rule or order."

9 SECTION 7. Section 269-145.5, Hawaii Revised Statutes, is  
10 amended to read as follows:

11 **"§269-145.5 Advanced grid modernization technology;**  
12 **principles.** (a) The commission, in carrying out its  
13 responsibilities under this chapter, shall consider the value of  
14 improving electrical generation, transmission, and distribution  
15 systems and infrastructure within the State through the use of  
16 advanced grid modernization technology in order to improve the  
17 overall reliability and operational efficiency of the Hawaii  
18 electric system.

19 (b) In advancing the public interest, the commission shall  
20 balance technical, economic, environmental, and cultural



1 considerations associated with modernization of the electric  
2 grid, based on principles that include but are not limited to:

- 3 (1) Enabling a diverse portfolio of renewable energy  
4 resources;
- 5 (2) Expanding options for customers to manage their energy  
6 use;
- 7 (3) Maximizing interconnection of distributed generation  
8 to the State's electric grids on a cost-effective  
9 basis at non-discriminatory terms and at just and  
10 reasonable rates, while maintaining the reliability of  
11 the State's electric grids, and allowing such access  
12 and rates through applicable rules, orders, and  
13 tariffs as reviewed and approved by the commission;
- 14 (4) Determining fair compensation for electric grid  
15 services and other benefits provided to customers and  
16 for electric grid services and other benefits provided  
17 by distributed generation customers and other non-  
18 utility service providers; ~~and~~
- 19 (5) Maintaining or enhancing grid reliability and safety  
20 through modernization of the State's electric  
21 grids ~~[ ]~~; and



1       (6) Maintaining and enhancing grid resiliency.  
2       (c) The commission shall require each electric public  
3 utility within its jurisdiction to incorporate a grid resiliency  
4 plan into the utility's integrated resource and grid  
5 modernization planning. All expenditures for grid resiliency  
6 approved by the commission as part of an electric public  
7 utility's integrated resource plan or grid modernization plan  
8 shall be presumed to be just and reasonable for the purposes of  
9 the grid resilience rebate program pursuant to section 269-A."

10       SECTION 8. There is appropriated out of the general  
11 revenues of the State of Hawaii the sum of \$                    or so much  
12 thereof as may be necessary for fiscal year 2018-2019 to be  
13 deposited into the grid resiliency capital investment special  
14 fund established pursuant to section 196-B, Hawaii Revised  
15 Statutes, established in section 2 of this Act.

16       SECTION 9. There is appropriated out of the grid  
17 resiliency capital investment special fund or so much thereof as  
18 may be necessary for fiscal year 2018-2019 for providing rebates  
19 for the purchase and installation of critical infrastructure  
20 pursuant to section 196-A, Hawaii Revised Statutes, established  
21 in section 2 of this Act.



1 The sum appropriated shall be expended by the department of  
2 business, economic development, and tourism for the purposes of  
3 this Act.

4 SECTION 10. In codifying the new sections added by  
5 sections 2 and 3 of this Act, the revisor of statutes shall  
6 substitute appropriate section numbers for the letters used in  
7 designating the new sections in this Act.

8 SECTION 11. Statutory material to be repealed is bracketed  
9 and stricken. New statutory material is underscored.

10 SECTION 12. This Act shall take effect on July 1, 2018.

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INTRODUCED BY:

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# H.B. NO. 2249

**Report Title:**

Grid Resiliency; Energy; Disaster Preparedness; Capital Investment; Rebate Program; Task Force

**Description:**

Establishes the grid resiliency capital investment program and the grid resiliency rebate program as well as a grid resiliency task force to prepare the State's electrical grid for natural disasters and other emergencies.

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

