

JAN 20 2017

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# A BILL FOR AN ACT

RELATING TO ENERGY STORAGE.

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

1       SECTION 1. In 2013, the Hawaii green infrastructure loan  
2 program was established, according to the strongly supportive  
3 testimony of the public utilities commission, to "serve as a  
4 potential source of capital for a range of clean energy  
5 technology users, including renters and residents that have not  
6 been able to take advantage of current financing programs and  
7 may now take advantage of increasing opportunities to install  
8 clean energy technology".

9       However, the State has seen a significant shift in  
10 opportunities for investment in renewable energy since 2013.  
11 The popular Net Energy Metering (NEM) program is now closed and  
12 the grid supply tariff has several limits on enrollment.  
13 Furthermore, the self-supply tariff, which only allows for the  
14 installation of a renewable energy system which does not export  
15 energy to the grid, requires at least some energy storage for  
16 most systems to operate efficiently. Energy storage adds  
17 considerable cost to renewable energy systems, and the added



1 cost and other restrictions have resulted in slow adoption of  
2 the self-supply tariff. At the same time, the development of  
3 energy storage is seen as a crucial next step toward the  
4 development of a smart, updated electrical grid which can  
5 accommodate more renewable energy resources, help customers take  
6 charge of their bills, and contribute to overall grid resiliency  
7 and reliability as we work toward our one hundred per cent  
8 Renewable Portfolio Standard (RPS) goal.

9 Due to these changes in the energy market and other  
10 factors, the Hawaii green infrastructure loan program has  
11 deployed less than 1.3 per cent of its loan funds as of  
12 January 1, 2017. The residential photovoltaic loan product  
13 currently offered by GEMS and available to underserved customers  
14 as originally envisioned by the legislature in 2013 is no longer  
15 relevant as NEM has closed and the grid supply tariff is limited  
16 by an enrollment cap. These challenges have resulted in a GEMS  
17 program that has not yet recognized its mission nor established  
18 truly viable products for the underserved markets, such as  
19 renewable energy offerings suitable for low to moderate income  
20 homeowners, renters, churches, and non-profit organizations.



1       The purpose of this Act is to assist all of Hawaii's  
2   electric ratepayers, including Hawaii's underserved residents  
3   and businesses, by broadening the scope of the GEMS authority  
4   and by repurposing a portion of the dormant funds to help  
5   accelerate the market transformation and adoption of energy  
6   storage technologies that can be utilized now.

7       The GEMS authority was created to accelerate the adoption  
8   of renewable energy and to ensure that all ratepayers could  
9   receive the benefits of renewable energy investments. This Act  
10   further provides guidance to maintain and strengthen the GEMS  
11   authority as an intact body, while also broadening the scope of  
12   the authority to include an updated mandate for renewable energy  
13   adoption in the State.

14       SECTION 2. Chapter 196, Hawaii Revised Statutes, is  
15   amended by adding two new sections to part IV to be  
16   appropriately designated and to read as follows:

17       "§196-A Energy storage market acceleration program; energy  
18   storage rebate program. (a) There is established the Hawaii  
19   energy storage market acceleration program that shall be  
20   administered as a rebate program by the authority in a manner  
21   consistent with this part. The authority shall:



1       (1) Prepare any forms that may be necessary for the energy  
2       storage system owner to claim a rebate from the energy  
3       storage system fund and shall post these forms on a  
4       publicly available website;

5       (2) Require the energy storage system owner claiming a  
6       rebate under this section to furnish reasonable  
7       information to ascertain the validity of the claim,  
8       including but not limited to documentation necessary  
9       to demonstrate that the system for which the rebate is  
10      claimed is an eligible energy storage system;

11      (3) Allow each energy storage system owner to establish  
12      income eligibility, as necessary, through a  
13      declaration asserting that the information provided is  
14      true and correct and made under penalty of law;

15      (4) Make best efforts to post on a publicly available  
16      website, within regular and reasonable periods of  
17      time, the current amounts remaining in the energy  
18      storage system fund;

19      (5) Establish guidelines necessary to effectuate the  
20      purposes of this section; provided that the



1           establishment of such guidelines shall not be subject  
2           to chapter 91;  
3   provided that the authority may contract with a third party for  
4   services to assist with administering the energy storage market  
5   acceleration fund and such procurement of services shall be  
6   exempt from the requirements of chapter 103D.

7           (b) Each energy storage system owner who provides third  
8   party financing to an energy storage system user, or purchases  
9   and installs in this State an eligible energy storage system,  
10   may apply to the authority, within twelve months of the eligible  
11   energy storage system's being first placed into service, for a  
12   rebate from the energy storage system fund, subject to the  
13   following:

- 14           (1) The maximum eligible rebate for each residential  
15           energy system where the federal adjusted gross income  
16           of the energy storage system user is \$75,000 or less  
17           for single filers or \$150,000 or less for joint filers  
18           in the preceding tax year in which the rebate is  
19           claimed shall be the lesser of \$10,000 or;  
20           (A) 75 cents per watt-hour of the system's warranted  
21           capacity of stored energy for systems first



1           placed in service after July 31, 2017, and before  
2           January 1, 2020;

3           (B) 65 cents per watt-hour of the system's warranted  
4           capacity of stored energy for systems first  
5           placed in service after December 31, 2019, and  
6           before January 1, 2021; or

7           (C) 55 cents per watt-hour of the system's warranted  
8           capacity of stored energy for systems first  
9           placed in service after December 31, 2020, and  
10          before January 1, 2022;

11          (2) The maximum eligible rebate for each residential  
12          energy system where the federal adjusted gross income  
13          of the energy storage user is greater than \$75,000 for  
14          single filers or greater than \$150,000 for joint  
15          filers in the preceding tax year in which the credit  
16          is claimed, shall be the lesser of \$10,000 or;

17          (A) 60 cents per watt-hour of the system's warranted  
18          capacity of stored energy for systems first  
19          placed in service after July 31, 2017, and before  
20          January 1, 2020;



1        (B) 50 cents per watt-hour of the system's warranted  
2        capacity of stored energy for systems first  
3        placed in service after December 31, 2019, and  
4        before January 1, 2021; or

5        (C) 40 cents per watt-hour of the system's warranted  
6        capacity of stored energy for systems first  
7        placed in service after December 31, 2020, and  
8        before January 1, 2022;

9        (3) The maximum eligible rebate for each multi-family  
10       energy storage system shall be the lesser of \$10,000  
11       or;

12       (A) 60 cents per watt-hour of the system's warranted  
13       capacity of stored energy for systems first  
14       placed in service after July 31, 2017, and before  
15       January 1, 2020;

16       (B) 50 cents per watt-hour of the system's warranted  
17       capacity of stored energy for systems first  
18       placed in service after December 31, 2019, and  
19       before January 1, 2021; or

20       (C) 40 cents per watt-hour of the system's warranted  
21       capacity of stored energy for systems first



1           placed in service after December 31, 2020, and  
2           before January 1, 2022;

3       (4) The maximum eligible rebate for each commercial energy  
4       storage system, shall be the lesser of \$10,000 or;

5       (A) 60 cents per watt-hour of the system's warranted  
6       capacity of stored energy for systems first  
7       placed in service after July 31, 2017, and before  
8       January 1, 2020;

9       (B) 50 cents per watt-hour of the system's warranted  
10       capacity of stored energy if applicable, for  
11       systems first placed in service after  
12       December 31, 2019, and before January 1, 2021; or

13       (C) 40 cents per watt-hour of the system's warranted  
14       capacity of stored energy for systems first  
15       placed in service after December 31, 2020, and  
16       before January 1, 2022;

17       (5) The maximum eligible rebate for each energy storage  
18       system that is co-sited and electrically connected to  
19       an eligible community-based renewable energy project  
20       as defined by the public utilities commission pursuant





1 to section 269-27.4 shall be the lesser of \$250,000

2 or;

3 (A) 45 cents per watt-hour of the system's warranted  
4 capacity of stored energy for systems first  
5 placed in service after July 31, 2017, and before  
6 January 1, 2020;

7 (B) 35 cents per watt-hour of the system's warranted  
8 capacity of stored energy for systems first  
9 placed in service after December 31, 2019, and  
10 before January 1, 2021;

11 (C) 25 cents per watt-hour of the system's warranted  
12 capacity of stored energy for systems first  
13 placed in service after December 31, 2020, and  
14 before January 1, 2022;

15 (d) This section shall apply to eligible energy storage  
16 systems that are installed and first placed in service after  
17 July 31, 2017.

18 **§196-B Energy storage market acceleration special fund.**

19 (a) There is established the energy storage market acceleration  
20 special fund into which shall be deposited appropriations from  
21 the Hawaii green infrastructure special fund.



1        (b) The moneys in the special fund shall be used to  
2        provide rebates through the energy storage system rebate program  
3        pursuant to section 196-A and for any administrative costs  
4        related to the program.

5        (c) The special fund shall be administered by the  
6        authority."

7        SECTION 3. Chapter 196, Hawaii Revised Statutes, is  
8        amended by amending the title of part IV to read as follows:

9        "[+]PART IV.[+] GREEN INFRASTRUCTURE LOANS AND ENERGY STORAGE  
10        MARKET ACCELERATION PROGRAM"

11        SECTION 4. Section 196-61, Hawaii Revised Statutes, is  
12        amended by adding six new definitions to be appropriately  
13        inserted and to read as follows:

14        "Eligible energy storage system" means any identifiable  
15        facility, equipment, or apparatus that:

16        (1) Receives electricity generated from another source or  
17        other sources, stores that electricity within a  
18        battery, and delivers the energy back at a later time  
19        to the energy storage system user, an electric  
20        utility, or the Hawaii electric system as defined in  
21        section 269-141;



1       (2) Is permanently fixed to a residential or commercial  
2       property and electrically connected to an energy  
3       storage system user's load or generation, or an energy  
4       storage system that is co-sited and permanently fixed  
5       to property and electrically connected to an eligible  
6       community-based renewable energy project;

7       (3) Has a continuous battery charge and discharge capacity  
8       of at least five kilowatt-hours of stored energy at  
9       time of purchase;

10       (4) Has a maximum battery charge and discharge power of no  
11       more than four megawatt-hours at time of purchase;

12       (5) Is protected by a manufacturer's warranty of at least  
13       ten years or a minimum of three thousand cycles;

14       (6) Is not owned by an electric utility; and

15       (7) Is connected to an electric utility grid.

16       "Energy storage market acceleration fund" means the special  
17       fund established pursuant to section 196-B for the purpose of  
18       providing rebates for eligible energy storage systems through  
19       the energy storage system rebate program.

20       "Energy storage market acceleration program" means the  
21       program established by section 196-A to fund rebates for



1 eligible energy storage systems from the storage market  
2 acceleration special fund.

3 "Energy storage system property owner" means the person,  
4 individual, partnership, corporation, association, or public or  
5 private organization other than an agency that holds legal title  
6 to the energy storage system. An energy storage system property  
7 owner shall include the owner of third-party financed energy  
8 storage systems. All of the energy storage behind a single  
9 meter shall be counted as one system.

10 "Energy storage system user" means the property owner, or  
11 the property owner's lessees or tenants, that use the energy  
12 discharged by the eligible energy storage system on the property  
13 where the eligible energy storage system is located or on  
14 contiguous property owned or leased by the property owner  
15 without regard to interruptions in contiguity caused by  
16 easements, public thoroughfares, transportation rights-of-way,  
17 and utility rights-of-way.

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

20 SECTION 5. Section 196-64, Hawaii Revised Statutes, is  
21 amended to read as follows:



1 " [f]§196-64 [f] Functions, powers, and duties of the  
2 authority. (a) In the performance of, and with respect to the  
3 functions, powers, and duties vested in the authority by this  
4 part, the authority, as directed by the director and in  
5 accordance with a green infrastructure loan program order or  
6 orders under section 269-171 or an annual plan submitted by the  
7 authority pursuant to this section, as approved by the public  
8 utilities commission may:

9 (1) Make loans and expend funds to finance the purchase or  
10 installation of green infrastructure equipment for  
11 clean energy technology, demand response technology,  
12 and energy use reduction and demand side management  
13 infrastructure, programs, and services;

14 (2) Hold and invest moneys in the green infrastructure  
15 special fund in investments as permitted by law and in  
16 accordance with approved investment guidelines  
17 established in one or more orders issued by the public  
18 utilities commission pursuant to section 269-171;

19 (3) Hire employees necessary to perform its duties,  
20 including an executive director. The executive  
21 director shall be appointed by the authority, and the



employees' positions, including the executive  
director's position, shall be exempt from chapter 76;

(4) Enter into contracts for the service of consultants  
for rendering professional and technical assistance  
and advice, and any other contracts that are necessary  
and proper for the implementation of the loan program;

(5) Enter into contracts for the administration of the  
loan program, without the necessity of complying with  
chapter 103D;

(6) Establish loan program guidelines to be approved in  
one or more orders issued by the public utilities  
commission pursuant to section 269-171 to carry out  
the purposes of this part;

(7) Be audited at least annually by a firm of independent  
certified public accountants selected by the  
authority, and provide the results of this audit to  
the department and the public utilities commission;  
and

(8) Perform all functions necessary to effectuate the  
purposes of this part.



1           (b) The authority shall submit to the public utilities  
2 commission an annual plan for review and approval no later than  
3 ninety days prior to the start of each fiscal year. The annual  
4 plan submitted by the authority shall include the authority's  
5 projected operational budget for the succeeding fiscal year.

6           (c) Notwithstanding subsections (a) and (b), the authority  
7 shall make available from the Hawaii green infrastructure  
8 special fund any amounts appropriated for deposit into the  
9 energy market acceleration special fund for the energy storage  
10 market rebate program."

11           SECTION 6. Section 196-65, Hawaii Revised Statutes, is  
12 amended by amending subsection (b) to read as follows:

13           "(b) Moneys in the Hawaii green infrastructure special  
14 fund may be used, subject to the approval of the public  
15 utilities commission, for the purposes of:

16           (1) Making green infrastructure loans;

17           (2) Paying administrative costs of the Hawaii green  
18 infrastructure loan program;

19           (3) Paying any other costs related to the Hawaii green  
20 infrastructure loan program; [ex]



(4) Paying financing costs, as defined in section 269-161, to the extent permitted by the public utilities commission in a financing order issued pursuant to section 269-163[-]; or

(5) Deposit into energy storage market acceleration special fund; provided that approval by the public utilities commission shall not be required for such deposit."

SECTION 7. Section 269-170, Hawaii Revised Statutes, is amended by amending subsection (a) to read as follows:

"(a) The authority shall submit an application to the public utilities commission for the use or other disposition of amounts deposited or held in the green infrastructure special fund pursuant to section 196-65 prior to the allocation, use, expenditure, or other disposition of any such amounts; provided that this subsection shall not apply to the following:

(1) The expenditure of amounts deposited or held in the green infrastructure special fund that have been reviewed and approved by the public utilities commission for operational or administrative expenses of the authority pursuant to section 196-64[-]; and





1        (2) The expenditure of amounts deposited or held in the  
2                Hawaii green infrastructure special fund for deposit  
3                into the energy storage market acceleration special  
4                fund for purpose of funding the energy storage market  
5                rebate program, pursuant to section 196-65(b)."

6            SECTION 8. (a) The legislature finds and declares that  
7 the appropriation of funds under this Act is in the public  
8 interest and for the public health, safety, and welfare.

9            (b) The department of business, economic development, and  
10 tourism and the green infrastructure authority shall develop any  
11 forms and guidelines necessary for the implementation of the  
12 energy storage market acceleration program created by section 2  
13 of this Act no later than December 31, 2017.

14           (c) To the extent there is any conflict between this Act  
15 and part III of chapter 39, Hawaii Revised Statutes, this Act  
16 shall prevail.

17           SECTION 9. There is appropriated out of the Hawaii green  
18 infrastructure special fund established pursuant to section 196-  
19 65, Hawaii Revised Statutes, the sum of \$50,000,000 or so much  
20 thereof as may be necessary for fiscal year 2017-2018 and the  
21 same sum or so much thereof as may be necessary for fiscal year



1 2018-2019 to be deposited into the energy storage market  
2 acceleration fund.

3 SECTION 10. There is appropriated out of the energy  
4 storage market acceleration fund the sum of \$50,000,000 or so  
5 much thereof as may be necessary for fiscal year 2017-2018 and  
6 the same sum or so much thereof as may be necessary for fiscal  
7 year 2018-2019 for making energy storage system rebate program  
8 payments pursuant to section 196-A, Hawaii Revised Statutes, and  
9 paying the authority's administrative costs for operating the  
10 energy storage system rebate program.

11 The sums appropriated shall be expended by the department  
12 of business, economic development, and tourism for the purposes  
13 of this Act.

14 SECTION 11. If any provision of this Act, or the  
15 application thereof to any person or circumstance, is held  
16 invalid, the invalidity does not affect other provisions or  
17 applications of the Act that can be given effect without the  
18 invalid provision or application, and to this end the provisions  
19 of this Act are severable.



1 SECTION 12. This Act does not affect rights and duties  
2 that matured, penalties that were incurred, and proceedings that  
3 were begun before its effective date.

4 SECTION 13. In codifying the new sections added by section  
5 2 of this Act, the revisor of statutes shall substitute  
6 appropriate section numbers for the letters used in designating  
7 the new sections in this Act.

8 SECTION 14. Statutory material to be repealed is bracketed  
9 and stricken. New statutory material is underscored.

10 SECTION 15. This Act shall take effect on July 1, 2017.

11

INTRODUCED BY:

*Marcia L. Grouse*  
*Clarence K. Kiehl*  
*Paul E. Bell*  
*Jim Gull*  
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*Donald J. [Signature]*



# S.B. NO. 660

**Report Title:**

Energy Storage Rebate Program; Energy Storage Market Acceleration Program; Green Infrastructure Special Fund; Energy Storage Market Acceleration Special Fund; Appropriation

**Description:**

Creates the energy storage market acceleration program and energy storage market acceleration special fund to be administered by the Hawaii green infrastructure authority. Establishes an energy storage system rebate for energy storage system providers and allows for rebates under the program to be paid out of the energy storage market acceleration special fund. Appropriates the funds from the Hawaii green infrastructure special fund to the energy storage market acceleration special fund for the purposes of paying rebates and administering the energy storage system rebate program.

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