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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. The legislature finds that Hawaii's dependency  
2 on imported fuel drains the State's economy of billions of  
3 dollars each year. A stronger local economy depends on a  
4 transition away from imported fuels and toward renewable local  
5 resources that provide a secure source of affordable energy.

6           The legislature also finds that alternative energy  
7 technologies have advanced significantly in recent years,  
8 leading to an explosion in new markets, jobs, and local energy  
9 sources. Due to these and other advances, Hawaii has made  
10 significant progress toward energy independence.

11           The legislature also finds that Hawaii is in a period of  
12 significant transition. In 2015, the legislature increased the  
13 State's clean energy goals to seventy per cent renewable energy  
14 by 2040 and to one hundred per cent renewable energy by 2045.  
15 The public utilities commission closed the State's net energy  
16 metering program and created two new distributed energy options:  
17 grid-supply and self-supply systems. Grid-supply systems allow  
18 the customer to export excess energy onto the electrical grid.



1 In 2016, the public utilities commission placed caps on the  
2 grid-supply system, and those caps were hit on several islands  
3 as early as August. Self-supply systems allow the customer to  
4 generate on-site electricity, but the customer may not export  
5 energy onto the grid. Most self-supply systems require a form  
6 of storage to be viable, and self-supply systems with storage  
7 can provide many useful services to the electrical grid for the  
8 benefit of the utility and all customers.

9 The legislature further finds that in order to continue to  
10 make meaningful progress toward Hawaii's goal of one hundred per  
11 cent renewable energy by 2045, Hawaii must invest in its  
12 electrical grid so that it can readily accommodate increasing  
13 intermittent renewable sources and continue to provide a  
14 resilient and efficient grid at a reasonable cost. In addition,  
15 the legislature finds that these investments must be engineered  
16 to support new tariffs and programs which are currently  
17 underway, including the residential time-of-use tariff approved  
18 by the commission in October of 2016, the community based  
19 renewable energy tariff, and the upcoming demand response  
20 tariffs, which will utilize customer-sited renewable



1 installations to provide capacity and multiple ancillary  
2 services.

3 The purpose of this Act is to establish a tax incentive for  
4 energy storage to support the development of energy storage for  
5 residential, commercial, and utility-scale systems.

6 SECTION 2. Chapter 235, Hawaii Revised Statutes, is  
7 amended by adding a new section to be appropriately designated  
8 and to read as follows:

9 "§235- Energy storage system; income tax credit. (a)

10 Each individual or corporate taxpayer that files an individual  
11 or corporate net income tax return for a taxable year may claim  
12 a tax credit under this section against the Hawaii state  
13 individual or corporate net income tax. The tax credit may be  
14 claimed for every eligible energy storage system that is charged  
15 by a renewable or nonrenewable energy source and installed and  
16 placed in service in the State by a taxpayer during the taxable  
17 year.

18 (b) The tax credit may be claimed as follows:

19 (1) For each residential energy storage system; provided  
20 that the federal adjusted gross income of the energy  
21 storage system owner is \$75,000 or less for single



1 filers, or \$150,000 or less for joint filers, in the  
2 preceding tax year in which the credit is claimed:

3 (A) Thirty-three per cent of the actual cost for an  
4 energy storage system first placed in service  
5 after December 31, 2017, and before January 1,  
6 2020;

7 (B) Twenty-nine per cent of the actual cost for an  
8 energy storage system first placed in service  
9 after December 31, 2019, and before January 1,  
10 2021;

11 (C) Twenty-four per cent of the actual cost for an  
12 energy storage system first placed in service  
13 after December 31, 2020, and before January 1,  
14 2022; and

15 (D) Eleven per cent of the actual cost for an energy  
16 storage system first placed in service after  
17 December 31, 2021;

18 (2) For each residential energy storage system; provided  
19 that the federal adjusted gross income of the energy  
20 storage owner is greater than \$75,000 for single



1 filers, or greater than \$150,000 for joint filers, in  
2 the preceding tax year in which the credit is claimed:

3 (A) Thirty per cent of the actual cost for an energy  
4 storage system first placed in service after  
5 December 31, 2017, and before January 1, 2020;

6 (B) Twenty-six per cent of the actual cost for an  
7 energy storage system first placed in service  
8 after December 31, 2019, and before January 1,  
9 2021;

10 (C) Twenty-two per cent of the actual cost for an  
11 energy storage system first placed in service  
12 after December 31, 2020, and before January 1,  
13 2022; and

14 (D) Ten per cent of the actual cost for an energy  
15 storage system first placed in service after  
16 December 31, 2021;

17 (3) For each multi-family energy storage system:

18 (A) Thirty per cent of the actual cost for an energy  
19 storage system first placed in service after  
20 December 31, 2017, and before January 1, 2020;



1           (B) Twenty-six per cent of the actual cost for an  
2           energy storage system first placed in service  
3           after December 31, 2019, and before January 1,  
4           2021;

5           (C) Twenty-two per cent of the actual cost for an  
6           energy storage system first placed in service  
7           after December 31, 2020, and before January 1,  
8           2022; and

9           (D) Ten per cent of the actual cost for an energy  
10           storage system first placed in service after  
11           December 31, 2021;

12       (4) For each commercial energy storage system:

13           (A) Thirty per cent of the actual cost for an energy  
14           storage system first placed in service after  
15           December 31, 2017, and before January 1, 2020;

16           (B) Twenty-six per cent of the actual cost for an  
17           energy storage system first placed in service  
18           after December 31, 2019, and before January 1,  
19           2021;

20           (C) Twenty-two per cent of the actual cost for an  
21           energy storage system first placed in service



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

3           (D)   Ten per cent of the actual cost for an energy  
4                   storage system first placed in service after  
5                   December 31, 2021;

6    (5)   For each utility-scale system; provided that the  
7           property is co-sited and electrically connected to an  
8           eligible community-based renewable energy project as  
9           determined by the public utilities commission pursuant  
10           to section 269-27.4:

11           (A)   Twenty-seven per cent of the actual cost for an  
12                   energy storage system first placed in service  
13                   after December 31, 2017, and before January 1,  
14                   2020;

15           (B)   Twenty-three per cent of the actual cost for an  
16                   energy storage system first placed in service  
17                   after December 31, 2019, and before January 1,  
18                   2021;

19           (C)   Twenty per cent of the actual cost for an energy  
20                   storage system first placed in service after



1                   December 31, 2020, and before January 1, 2022;  
2                   and  
3                   (D) Nine per cent of the actual cost for an energy  
4                   storage system first placed in service after  
5                   December 31, 2021; and  
6                   (6) For each combined energy storage and solar energy  
7                   system the applicable per cent of the actual cost for  
8                   an energy storage system as described in paragraph  
9                   (1), (2), (3), (4), or (5) of this subsection plus one  
10                   half of the available renewable energy technologies  
11                   income tax credit available for a solar energy system  
12                   pursuant to section 235-12.5.  
13 Multiple owners of a single energy storage system or a combined  
14 energy storage and solar energy system shall be entitled to a  
15 single tax credit, and the tax credit shall be apportioned  
16 between the owners in proportion to their contribution to the  
17 cost of the energy system.  
18                   (c) In the case of a partnership, S corporation, estate,  
19 or trust, the tax credit allowable is for every eligible energy  
20 storage system that is installed and placed in service in the  
21 State by the entity. The cost upon which the tax credit is





1 computed shall be determined at the entity level. Distribution  
2 and share of credit shall be determined pursuant to section  
3 704(b) of the Internal Revenue Code.

4 (d) The amount of the credit available for every eligible  
5 energy storage system shall not exceed the applicable cap  
6 amount, which is as follows:

7 (1) \$7,000 for residential energy storage systems;

8 (2) \$7,000 for multi-family energy storage systems;

9 (3) \$20,000 for commercial energy storage systems; and

10 (4) \$500,000 for utility-scale energy storage systems.

11 (e) For the purposes of this section:

12 "Actual cost" means costs related to the energy storage  
13 system under subsection (a), including accessories and  
14 installation, but not including the cost of consumer incentive  
15 premiums unrelated to the operation of the system or offered  
16 with the sale of the system and costs for which another credit  
17 is claimed under this chapter.

18 "Energy storage system" means any identifiable facility,  
19 equipment, apparatus, including battery, grid-interactive water  
20 heater, ice storage air conditioner, or the like, that:



- 1        (1) Receives electricity generated from another source or  
2        other sources, stores that electricity as electrical,  
3        chemical, thermal, or mechanical energy, and delivers  
4        the energy back to an electric utility or the owner of  
5        the electric system at a later time;
- 6        (2) Is fixed to a residential or commercial property and  
7        electrically connected to an energy storage system  
8        owner's load or generation and is connected to the  
9        electric utility system if the property is connected  
10       to the electric utility system, or in the case of a  
11       utility-scale system, is fixed to a property and  
12       electrically connected to an eligible community-based  
13       renewable energy project;
- 14       (3) For residential and multi-family energy storage  
15       systems, has at least five kilowatt-hours of stored  
16       energy at time of purchase;
- 17       (4) For commercial energy storage systems, has at least  
18       one hundred kilowatt-hours of stored energy at time of  
19       purchase; and
- 20       (5) For utility scale systems, has at most five megawatt-  
21       hours of stored energy at time of purchase.



1 "First placed in service" has the same meaning as provided  
2 in title 26 Code of Federal Regulations section 1.167(a) -  
3 11(e)(1).

4 (f) The director of taxation shall prepare any forms that  
5 may be necessary to claim a tax credit under this section. The  
6 director may also require the taxpayer to furnish reasonable  
7 information to ascertain the validity of the claim for credit  
8 made under this section and may adopt rules necessary to  
9 effectuate the purposes of this section pursuant to chapter 91.

10 (g) If the tax credit under this section exceeds the  
11 taxpayer's income tax liability, the excess of the credit over  
12 liability may be used as a credit against the taxpayer's income  
13 tax liability in subsequent years until exhausted, unless the  
14 taxpayer elects another option pursuant to subsection (h) or  
15 (i). All claims for the tax credit under this section,  
16 including amended claims, shall be filed on or before the end of  
17 the twelfth month following the close of the taxable year for  
18 which the credit may be claimed. Failure to comply with this  
19 subsection shall constitute a waiver of the right to claim the  
20 credit.



1        (h) For any tax credit under this section, a taxpayer may  
2 elect to reduce the eligible credit amount by thirty per cent  
3 and if this reduced amount exceeds the amount of income tax  
4 payment due from the taxpayer, the excess of the credit amount  
5 over payments due shall be refunded to the taxpayer; provided  
6 that tax credit amounts properly claimed by a taxpayer who has  
7 no income tax liability shall be paid to the taxpayer; and  
8 provided further that no refund on account of the tax credit  
9 allowed by this section shall be made for amounts less than \$1.

10        The election required by this subsection shall be made in a  
11 manner prescribed by the director of taxation on the taxpayer's  
12 return for the taxable year in which the energy storage system  
13 is installed and first placed in service. An election once made  
14 is irrevocable.

15        (i) In lieu of subsection (h), for any tax credit under  
16 this section, an individual taxpayer may elect to have any  
17 excess of the credit over payments due refunded to the taxpayer,  
18 without discount, if:

19        (1) All of the taxpayer's income is exempt from taxation  
20 under section 235-7(a)(2) or (3); or



1       (2) The taxpayer's adjusted gross income is \$20,000 or  
2       less for single filers, or \$40,000 or less for joint  
3       filers;  
4       provided that tax credits properly claimed by a taxpayer who has  
5       no income tax liability shall be paid to the taxpayer; and  
6       provided further that no refund on account of the tax credit  
7       allowed by this section shall be made for amounts less than \$1.  
8       Spouses who do not file a joint tax return shall only be  
9       entitled to make this election to the extent that they would  
10      have been entitled to make this election had they filed a joint  
11      tax return.  
12      The election required by this subsection shall be made in a  
13      manner prescribed by the director of taxation on the taxpayer's  
14      return for the taxable year in which the energy storage system  
15      is installed and first placed in service. An election once made  
16      is irrevocable.  
17      (j) No tax credit under this section shall be allowed for  
18      any taxable year beginning after December 31, 2035.  
19      (k) The department of taxation, in collaboration with the  
20      department of business, economic development, and tourism, shall  
21      submit a joint report to the legislature annually no later than



1 twenty days prior to the convening of each regular session on  
2 the following for the preceding taxable year:

3       (1) The number of energy storage properties that have  
4 qualified for a tax credit during the calendar year,  
5 listed by property type and taxpayer type (corporate  
6 and individual);

7       (2) The total cost of the tax credit to the State during  
8 the taxable year, listed by property type, taxpayer  
9 type, credit type (investment or production), and by  
10 refundable and nonrefundable credit; and

11       (3) The estimated economic impact that may be attributable  
12 to the energy storage tax credit, including:

13           (A) Economic boost;

14           (B) Net flow of money into or out of the State;

15           (C) General excise and income tax revenue generated;

16           and

17           (D) Impact on jobs, including the number of jobs  
18 maintained, number of jobs created, and average  
19 pay.

20       (1) The department of business, economic development, and  
21 tourism shall commence a study no later than July 1, 2019, on



1 the costs incurred and benefits generated by this section, as  
2 well as the extent to which the tax credit under this section  
3 has helped the State to achieve its energy goals. In conducting  
4 this study, the department of business, economic development,  
5 and tourism shall consult with the department of taxation and  
6 industry trade groups and may consult with other stakeholders.  
7 The department of business, economic development, and tourism  
8 shall submit a report to the legislature no later than  
9 December 31, 2020. The report shall include the following:

- 10       (1) The annual report requirements listed in subsection  
11             (k);  
12       (2) The results of the department's study; and  
13       (3) Recommendations on whether the tax credit under this  
14             section should be wholly or partially continued,  
15             eliminated, or revised."

16       SECTION 3. Section 235-12.5, Hawaii Revised Statutes, is  
17 amended by amending subsection (c) to read as follows:

18       "(c) For the purposes of this section:

19       "Actual cost" means costs related to the renewable energy  
20 technology systems under subsection (a), including accessories  
21 and installation, but not including the cost of consumer



1 incentive premiums unrelated to the operation of the system or  
2 offered with the sale of the system and costs for which another  
3 credit is claimed under this chapter. "Actual cost" does not  
4 include costs related to energy storage systems, as defined in  
5 section 235- .

6 "First placed in service" has the same meaning as provided  
7 in title 26 Code of Federal Regulations section 1.167(a)-  
8 11(e)(1).

9 "Household use" means any use to which heated water is  
10 commonly put in a residential setting, including commercial  
11 application of those uses.

12 "Renewable energy technology system" means a new system  
13 that captures and converts a renewable source of energy, such as  
14 solar or wind energy, into:

- 15 (1) A usable source of thermal or mechanical energy;  
16 (2) Electricity; or  
17 (3) Fuel.

18 "Solar or wind energy system" means any identifiable  
19 facility, equipment, apparatus, or the like that converts solar  
20 or wind energy to useful thermal or electrical energy for





1 heating, cooling, or reducing the use of other types of energy  
2 that are dependent upon fossil fuel for their generation."

3 SECTION 4. New statutory material is underscored.

4 SECTION 5. This Act shall take effect upon its approval,  
5 and shall apply to taxable years beginning after December 31,  
6 2017.

7



**Report Title:**

Energy Storage System Tax Credit

**Description:**

Establishes an income tax credit for taxpayers who purchase and install eligible energy storage systems. The amount of credit depends on type of system installed, filing status, and federal AGI of taxpayer. Excess credit may carry-over to subsequent tax years or is refundable under certain conditions. Applies to taxable years after 12/31/2017. Sunsets tax credit 12/31/2035. Requires the Department of Business, Economic Development, and Tourism to conduct a study and submit a report to the Legislature regarding the usage of energy storage systems. Amends reusable energy technologies tax credit to harmonize definitions. (SD1)

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