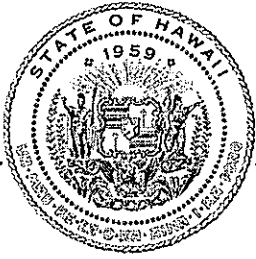


SB 1479



**DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM**

NEIL ABERCROMBIE
GOVERNOR

RICHARD C. LIM
INTERIM DIRECTOR

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Statement of
RICHARD C. LIM
Interim Director
Department of Business, Economic Development, and Tourism
before the
SENATE COMMITTEE ON ENERGY AND ENVIRONMENT

Tuesday, February 8, 2011
3:00 PM
State Capitol, Conference Room 225

in consideration of
SB 1479
RELATING TO ENERGY.

Chair Gabbard, Vice Chair English, and Members of the Committee.

The Department of Business, Economic Development, and Tourism (DBEDT) supports the intent of SB1479, which would provide a tax credit of 25% for energy storage systems, but defers to the Department of Taxation with respect to potential impact on priorities in the Executive Biennium Budget.

Energy storage systems, either integrated with renewable energy systems or designed to manage intermittency caused by renewable energy systems, could increase the utilization of renewable energy and reduce the potential impacts of intermittent systems on the grid.

However, the Committee should be aware that the bill as written is quite broad.

Energy storage systems include not only batteries but also hydrogen fuel cell systems, flywheels, capacitors, pumped hydro storage systems, compressed air energy storage systems, and other devices.

The bill defines a clean energy storage system as “capable of storing electrical energy derived from renewable energy sources.” It could be argued that any energy storage system, whether or not it is connected to a renewable energy system, would be eligible, since all energy storage systems are “capable” of storing electricity derived from renewable energy sources.

Also, this bill does not specify that the energy storage systems be interconnected to the grid, so the proposed tax credit could also apply to stand-alone energy storage systems. As such, DBEDT recommends a modification to the definition so that it only includes the storage systems that are part of the renewable energy systems that are interconnected to the grid or grid-connected storage systems. Also of importance is the need to clarify whether the credit applies to utility-owned/installed clean energy storage systems.

We believe that energy storage is an important part of a flexible and reliable energy system for Hawaii, and appreciate the Committee’s willingness to consider a variety of approaches and solutions.

We do not have a cost estimate for this measure.

Thank you for the opportunity to offer these comments.

NEIL ABERCROMBIE
GOVERNOR

BRIAN SCHATZ
LT. GOVERNOR



STATE OF HAWAII
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FREDERICK D. PABLO
INTERIM DIRECTOR OF TAXATION

RANDOLF L. M. BALDEMOR
DEPUTY DIRECTOR

SENATE COMMITTEES ON ENERGY & ENVIRONMENT

TESTIMONY OF THE DEPARTMENT OF TAXATION REGARDING SB 1479 RELATING TO ENERGY

TESTIFIER: FREDERICK D. PABLO, INTERIM DIRECTOR OF TAXATION (OR DESIGNEE)
COMMITTEE: ENE
DATE: FEBRUARY 8, 2011
TIME: 3PM
POSITION: NO POSITION; CONCERNED WITH COSTS

This measure expands the renewable energy technologies income tax credit to include "clean energy storage systems."

The Department of Taxation (Department) takes no position on this measure; however has concerns regarding its revenue loss.

DEFERRAL TO DBEDT—The Department defers to the Department of Business, Economic Development & Tourism on whether there should be tax incentives for clean energy storage systems. The Department generally supports efforts to expand renewable energy in Hawaii.

VAGUE DEFINITION—The Department points out that the definition of "clean energy storage system" is rather vague. Is this a battery? Is it a system that should/should not be comprised of any specific technology?

ADD A CAP AMOUNT—For consistency with the renewable energy technologies income tax credit, there should be a per-system cap.

NOT FACTORED INTO BUDGET—The Department must be cognizant of the biennium budget and financial plan. This measure has not been factored into either.

TAXBILLSERVICE

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SUBJECT: INCOME, Credit for clean energy storage system

BILL NUMBER: SB 1479

INTRODUCED BY: Gabbard, Kidani and 7 Democrats

BRIEF SUMMARY: Amends HRS section 235-12(a) to allow taxpayers to claim a tax credit for the purchase and installation of a clean energy storage system. The credit shall be 25% of the cost of the device. Defines "clean energy storage system" as a system that is capable of storing electrical energy derived from renewable energy sources.

EFFECTIVE DATE: January 1, 2012

STAFF COMMENTS: It appears that this measure is proposed to encourage taxpayers to use clean energy storage systems by allowing taxpayers to claim a 35% tax credit for the costs of a system. While some may consider an incentive necessary to encourage the use of energy conservation devices, it should be noted that the high cost of these energy systems limits the benefits to those who have the initial capital to make the purchase.

While the measure defines "clean energy storage system" as a system that is capable of storing electrical energy derived from renewable energy sources, a more definitive definition is needed to prevent this credit from being applied to AA rechargeable batteries connected to a portable photovoltaic panel or a car battery connected to a solar panel placed on a dashboard. While the vagueness of the definition may also be construed to include batteries connected to a photovoltaic array on a dwelling or commercial building, due to their high cost, not many such devices are utilized in a typical installation.

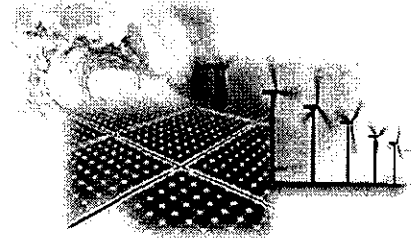
While some may consider an incentive necessary to encourage the use of energy conservation devices such as these clean energy storage systems, it should be noted that the high cost of these energy systems limits the benefit to those who have the initial capital to make the purchase. It is doubtful that the state credits alone will encourage many more taxpayers to utilize this technology given the scarcity and the relative high cost to acquire.

Lawmakers need to remember two things. First, the tax system is the device that raises the money that they, lawmakers, like to spend. Using the tax system to shape social policy merely throws the revenue raising system out of whack, making the system less than reliable as there is no way to determine how many taxpayers will avail themselves of the credit and in what amount. The second point to remember about tax credits is that they are nothing more than the expenditure of public dollars albeit out the back door. If, in fact, these dollars were subject to the appropriation process, would taxpayers be as kind about the expenditure of these funds when schools go wanting for books and repairs, or when there isn't enough money for social service programs.

SB 1470 - Continued

Utilizing tax credits other than to alleviate an excessive tax burden cannot be justified and is of a questionable benefit relative to the cost for all taxpayers. If lawmakers want to encourage the use of clean energy storage systems by reducing the cost of such systems, then a direct appropriation to subsidize that cost would be more accountable and transparent.

Digested 2/7/11



SENATE COMMITTEE ON ENERGY AND ENVIRONMENT

February 8, 2011, 3:00 P.M.

Room 225

(Testimony is pages long)

TESTIMONY IN SUPPORT OF SB 1479, SUGGESTED AMENDMENTS

Chair Gabbard and members of the Committee:

The Blue Planet Foundation supports SB 1479, a measure establishing a tax credit for clean energy storage systems in Hawai'i. Energy storage—whether it be batteries, ultra-capacitors, or some other technology—will be an integral part of our island electricity systems. These technologies are evolving rapidly and in the technology development and deployment stage where tax credits could make a critical difference in adoption rates.

Senate Bill 1479 is intended to support variable energy sources, including wind and solar power, while moderating energy demands during peak hours and facilitating a "smart grid" that is more reliable in order to improve Hawai'i's island electricity grids and achieve the state's clean energy future. This measure would help improve the efficiency, versatility and reliability of Hawai'i's electric grids, and would offer more affordable energy storage technologies for homes and businesses. It would offer an income tax credit for storage systems connected to the electric grid, and on-site energy storage for businesses and homes.

Hawai'i's electricity grid needs energy storage to achieve the state's aggressive clean energy goals. To take advantage of distributed and diversified energy like solar and wind and other variable sources of power, the grid has to become smarter and have the capacity to store electricity. It will resemble today's Internet—where distributed servers both send and receive packets of information—and less like yesterday's commercial television. Such a self-aware, robust smart grid will instantaneously adjust to shifts in wind strength or cloud cover over solar, balancing energy loads on the other side of the wire and drawing on stored energy when needed.

Hawai'i's economy needs power that's as dependable as the sunrise. To make full use of all of Hawai'i's native energy sources we need the ability to store power for times when the sun isn't shining or the wind isn't blowing. While it's not clear what form will be most cost effective—fuel

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cells, pumped water, flywheels, ultra capacitors, batteries, dilithium crystals—we do know that the technology is evolving rapidly. Consider data storage for computers. In the late 1950s, cutting-edge data storage could store the equivalent of one MP3 file in the space of half a carport. Today, over 12,000 such files fit on a keychain flash drive. We are seeing a similar evolution for power storage, with the cost of battery storage dropping at nearly 8% annually.

SUGGESTED AMENDMENTS

Blue Planet Foundation respectfully asks that the Committee on Energy and Environment to amend SB 1479 to ensure that it achieves its intent—that is, to provide an increasing amount of clean energy storage on Hawaii's electricity grids. We recommend the following amendments to the definition of "clean energy storage system" on page 3, lines 1 through 3:

For purposes of this subsection, "clean energy storage system" means a system that is capable of storing electrical energy derived from renewable energy sources which:

- (a) provides supplemental energy to reduce peak energy requirements primarily on the same site where the storage is located, or is designed and used primarily to receive and store intermittent renewable energy generated onsite and to deliver such energy primarily for onsite consumption;
- (b) has the ability to store the energy equivalent of at least 10 kilowatt hours of energy;
- (c) has the ability to have an output of the energy equivalent of 2 kilowatts of electricity for a period of 4 hours; and
- (d) has a roundtrip energy storage efficiency of not less than 80 percent.

Expanding Hawaii's energy storage capacity will improve the efficiency, flexibility, and reliability of our electric grid, allowing us to wring the most power out of it, while adding large amounts of new renewable energy resources like wind and solar.

Please forward an amended SB 1479.

Thank you for the opportunity to testify.

Aloha Chair Gabbard and members of the Committee:

It is with great pleasure that I submit my testimony in support of SB 1479, which would create a state income tax credit for the installation of systems that store renewable energy.

As you know, renewable energy from the sun and wind is intermittent. We must create a mechanism that will encourage the installation of storage systems around the grid, which will stabilize our energy infrastructure. This bill helps get us there and ultimately helps us reach our clean energy goals.

Thank-you for the opportunity to testify.

Mahalo for considering my testimony.

Brian Bell
4626 Sierra Dr.
Honolulu, HI 96816
808-227-7087

Testimony for ENE 2/8/2011 3:00:00 PM SB1479

Conference room: 225

Testifier position: support

Testifier will be present: No

Submitted by: Michael Reed Gach

Organization: Individual

Submitted on: 2/7/2011

Comments:

I support income tax credit for renewable energy storage systems which will encourage putting more renewable energy on the grid.

Testimony for ENE 2/8/2011 3:00:00 PM SB1479

Conference room: 225
Testifier position: support
Testifier will be present: No
Submitted by: Pualani Ramos
Organization: Na Pualani Learning Ohana
Submitted on: 2/7/2011

Comments:

Dear Folks,

Please support this bill. We need to encourage use of renewable energy sources and energy storage systems are all about that. Especially as we have so much sunshine; we should all be using and storing solar energy and distributing it where it is needed.

Mahalo for your support.

Pualani Ramos