

HB 1543, HD 1

RELATING TO ENERGY TRAINING.

EEP, LAB, FIN

HB1543 HD1



Submit Testimony

Measure Title: RELATING TO ENERGY TRAINING.

Report Title: Energy Systems and Technology; Training; State Employees; County Employees; Appropriation

Description: Establishes energy systems and technology training courses for state and county employees responsible for permitting, inspecting, licensing, and approving construction projects that contain renewable energy systems and related technology. Appropriates funds. (HB1543 HD1)

Companion:

Package: None

Current Referral: EEP, LAB, FIN

Introducer(s): LOWEN, CULLEN, FUKUMOTO, C. LEE, LUKE, MCKELVEY, NAKASHIMA, SAY, YAMANE, YAMASHITA

<u>Sort by Date</u>		Status Text
1/25/2017	H	Introduced and Pass First Reading.
1/30/2017	H	Referred to EEP, LAB, FIN, referral sheet 6
1/30/2017	H	Bill scheduled to be heard by EEP on Thursday, 02-02-17 8:30AM in House conference room 325.
2/2/2017	H	The committees on EEP recommend that the measure be PASSED, WITH AMENDMENTS. The votes were as follows: 9 Ayes: Representative(s) C. Lee, Lowen, Cullen, Evans, Ichiyama, Kong, Say, Yamane, Fukumoto; Ayes with reservations: none; Noes: none; and Excused: none.
2/7/2017	H	Reported from EEP (Stand. Com. Rep. No. 73) as amended in HD 1, recommending passage on Second Reading and referral to LAB.
2/7/2017	H	Passed Second Reading as amended in HD 1 and referred to the committee(s) on LAB with none voting aye with reservations; none voting no (0) and Representative(s) Oshiro excused (1).
2/10/2017	H	Bill scheduled to be heard by LAB on Tuesday, 02-14-17 10:00AM in House conference room 309.

A BILL FOR AN ACT

RELATING TO ENERGY TRAINING.

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

1 SECTION 1. The State's ambitious clean energy goals, along
2 with advances in energy technology, have created incentives for
3 the adoption of new technology, energy systems, and equipment,
4 including solar panels and energy storage batteries.

5 Installation of these modern energy systems has been an
6 economic driver of the economy, reduced the State's dependence
7 on imported oil, and helped to protect the environment, but the
8 increased construction has placed additional burdens on some
9 county and state employees. Employees responsible for
10 permitting, inspecting, licensing, and approving projects,
11 including employees at county public works departments,
12 employees at planning and permitting departments, and
13 firefighters, must now remain constantly informed of new
14 technology in the energy sector. However, the legislature finds
15 that many of these employees are not provided with the proper
16 training and must either research the standards themselves or
17 pay for their own training. In addition, the lack of training



1 can lead to unnecessary delays in the approval or implementation
2 of a project.

3 The purpose of this Act is to create a program to provide
4 training to the state and county employees responsible for
5 permitting, inspecting, licensing, and approving energy systems
6 and related technology.

7 SECTION 2. Chapter 196, Hawaii Revised Statutes, is
8 amended by adding a new section to part I to be appropriately
9 designated and to read as follows:

10 "§196- Energy systems and technology training. (a)
11 Energy systems and technology training courses shall be
12 established as needed to educate relevant officers and employees
13 of the State and counties on the various standards and
14 requirements for renewable energy systems and related
15 technology. The courses, including any materials necessary to
16 implement the courses, may be developed, designed, prepared, and
17 conducted by the department of business, economic development,
18 and tourism, or by a public or private entity contracted by the
19 department.

20 (b) The energy systems and technology training courses
21 shall include information on:



- 1 (1) New innovations in energy systems and technology, such
2 as recent advancements in energy storage and the
3 interaction of energy systems and technology with the
4 electrical grid;
- 5 (2) The implementation of new and existing energy systems
6 and technology in compliance with international,
7 national, state, and county standards, including
8 building and fire codes; and
- 9 (3) Any other relevant topic pertaining to the various
10 standards and requirements for renewable energy
11 systems and related technology.
- 12 (c) The department of business, economic development, and
13 tourism may:
- 14 (1) Administer the energy systems and technology training
15 courses;
- 16 (2) Provide notifications or advertisements of the courses
17 to relevant state and county employees, including
18 employees at county public works departments,
19 employees at planning and permitting departments,
20 firefighters, and others involved in the permitting,



1 inspecting, licensing, and approving of construction
2 projects; and

3 (3) Provide the courses at no cost to the participants.

4 (d) The department of business, economic development, and
5 tourism may designate its staff to conduct the energy systems
6 and technology training courses or contract with a public or
7 private entity to conduct the courses."

8 SECTION 3. There is appropriated out of the general
9 revenues of the State of Hawaii the sum of \$ or so much
10 thereof as may be necessary for fiscal year 2017-2018 and the
11 same sum or so much thereof as may be necessary for fiscal year
12 2018-2019 for energy systems and technology training as provided
13 for in this Act.

14 The sums appropriated shall be expended by the department
15 of business, economic development, and tourism for the purposes
16 of this Act.

17 SECTION 4. New statutory material is underscored.

18 SECTION 5. This Act shall take effect upon its approval.



Report Title:

Energy Systems and Technology; Training; State Employees; County Employees; Appropriation

Description:

Establishes energy systems and technology training courses for state and county employees responsible for permitting, inspecting, licensing, and approving construction projects that contain renewable energy systems and related technology. Appropriates funds. (HB1543 HD1)

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



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1 SECTION 1. The State's ambitious clean energy goals, along
2 with advances in energy technology, have created incentives for
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5 While installation of these modern energy systems has been
6 an economic driver of the economy, reduced the State's
7 dependence on imported oil, and helped to protect the
8 environment, the increased construction has placed additional
9 burdens on some county and state employees. Employees
10 responsible for permitting, inspecting, licensing, and approving
11 construction projects, including employees at county public
12 works departments, employees at planning and permitting
13 departments, and firefighters, must now also remain constantly
14 informed of new technology in the energy sector. However, the
15 legislature finds that many of these employees are not provided
16 with the proper training and must either research the standards
17 themselves or pay for their own training. In addition, the lack



1 of training can sometimes lead to unnecessary delays in the
2 approval or implementation of a project.

3 The purpose of this Act is to create a program to provide
4 training to the state and county employees responsible for
5 permitting, licensing, inspecting, reviewing, and approving
6 building energy systems and related technology.

7 SECTION 2. Chapter 196, Hawaii Revised Statutes, is
8 amended by adding a new section to part I to be appropriately
9 designated and to read as follows:

10 "§196- Energy systems and technology training. (a)

11 The department of business, economic development, and tourism
12 shall establish, design, supervise, and conduct energy systems
13 and technology training courses as needed to educate relevant
14 officers and employees of the State and counties on the various
15 standards and requirements for renewable energy systems and
16 related technology. The department of business, economic
17 development, and tourism shall develop the methods and prepare
18 any materials necessary to implement the courses.

19 (b) The energy systems and technology training courses
20 shall include information on:



- 1 (1) New innovations in energy systems and technology, such
2 as recent advancements in energy storage and the
3 interaction of energy systems and technology with the
4 electrical grid;
- 5 (2) The implementation of new and existing energy systems
6 and technology in compliance with international,
7 national, state, and county standards, including
8 building and fire codes; and
- 9 (3) Any other relevant topic pertaining to the various
10 standards and requirements for renewable energy
11 systems and related technology.
- 12 (c) The department of business, economic development, and
13 tourism shall:
- 14 (1) Administer the energy systems and technology training
15 courses;
- 16 (2) Provide notifications or advertisements of the courses
17 to relevant state and county employees, including
18 employees at county public works departments,
19 employees at planning and permitting departments,
20 firefighters, and others involved in the permitting,



1 inspecting, licensing, and approving of construction
2 projects; and

3 (3) Provide the courses at no cost to the participants.

4 (d) The department of business, economic development, and
5 tourism may designate those of its staff who are to conduct the
6 energy systems and technology training courses or contract with
7 a public or private entity to conduct the courses."

8 SECTION 3. New statutory material is underscored.

9 SECTION 4. This Act shall take effect upon its approval.

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INTRODUCED BY: Nicole E. Lower

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Calvin H. Ray
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JAN 25 2017

H.B. NO. 1543

Report Title:

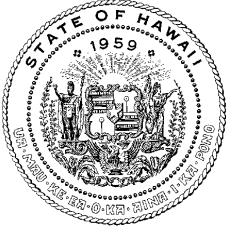
Energy Systems and Technology; Training; State Employees; County Employees

Description:

Requires DBEDT to establish an optional energy training course for state and county employees responsible for permitting, inspecting, licensing, and approving construction projects that contain renewable energy systems and related technology.

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





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

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Statement of
LUIS P. SALAVERIA
Director
Department of Business, Economic Development, and Tourism
before the
HOUSE COMMITTEE ON COMMITTEE ON LABOR & PUBLIC EMPLOYMENT

February 14, 2017
10 a.m.
State Capitol, Conference Room 309

in consideration of
HB 1543, HD1
RELATING TO ENERGY TRAINING.

Chair Ling Johanson, Vice Chair Holt, and Members of the Committee.

The Department of Business, Economic Development and Tourism (DBEDT) opposes HB1543, HD1 which requires DBEDT to establish an optional energy training course for state and county employees responsible for permitting, inspecting, licensing, and approving construction projects that contain renewable energy systems and related technology.

DBEDT is fundamentally not a curriculum development agency. As such, DBEDT is not equipped in its current budget with the appropriate human and financial resources to develop the ongoing curriculum required by this measure. For example, in order to implement the requirements of this measure, DBEDT would need ongoing (not just one time) funding and additional staff. However, DBEDT is open to providing feedback to the appropriate agencies on energy matters that would aid them in developing energy related training. It is our opinion that such assistance from DBEDT would **not** require legislative action.

Thank you for the opportunity to offer testimony on HB 1543, HD1.



Before the House Committee on Labor & Public Employment
Tuesday, February 14, 2017, 10 a.m., Room 309
HB 1543 HD 1: Relating to Energy Training

Aloha Chair Johanson, Vice Chair Holt, and members of the Committee,

On behalf of the Distributed Energy Resources Council of Hawaii (“DER Council”), I would like to testify in strong support for HB 1543 HD 1 which authorizes DBEDT to establish an optional training course for state and county employees responsible for permitting, inspecting, licensing and approving construction projects that contain renewable energy systems and related technology, and appropriates an unspecified amount to establish the training course.

The DER Council is a nonprofit trade organization formed to assist with the development of distributed energy resources and smart grid technologies which will support an affordable, reliable, and sustainable energy supply for Hawaii.

In the last few years, the renewable energy industry has been undergoing a rapid technological evolution. Both the components of renewable energy installations and the configurations of the installations have continued to evolve, and inspectors and plan checkers need to be informed and up to date to do their jobs. They are expected to understand a very wide variety of system and component variables ranging from smart inverters, AC and DC configurations, various battery chemistries, fire safety and enforcement protocol, and the many battery management systems that ensure safe and efficient operation of systems that include battery energy storage, just to name a few.

Unfortunately, there is no formal or ongoing means in place by which inspectors and plan checkers who work for the state and county can learn about the ongoing changes in the renewable energy industry. This means that state and county employees have different levels of understanding about renewable energy installations, resulting at times in the inconsistent application of the rules and an inefficient process where plans and inspections can be greatly delayed if the installation has unfamiliar technology

The state and county employees who work to ensure that renewable energy installations are safe and properly designed and installed should be given the option of trainings in renewable energy so that they can get the information that they need. In addition, we believe that the state energy office under DBEDT is the best entity to facilitate these trainings. Right now, the permitting and inspection process is one of the main impediments to renewable energy projects getting installed and energized. Without the necessary training, Hawaii’s 100% RPS goal will be adversely compromised. We therefore urge this committee to support HB 1543 HD 1.

Thank you for the opportunity to testify
Leslie Cole-Brooks
Executive Director
Distributed Energy Resources Council of Hawaii

HB 1543, HD 1

Late Testimony

LATE

LATE

LATE

LABtestimony

From: mailinglist@capitol.hawaii.gov
 Sent: Monday, February 13, 2017 4:48 PM
 To: LABtestimony
 Cc: joe.k@renewableenergy.com
 Subject: Submitted testimony for HB1543 on Feb 14, 2017 10:00AM

HB1543

Submitted on: 2/13/2017

Testimony for LAB on Feb 14, 2017 10:00AM in Conference Room 309

Submitted By	Organization	Testifier Position	Present at Hearing
Joe Kent	Renewable Energy Services	Support	No

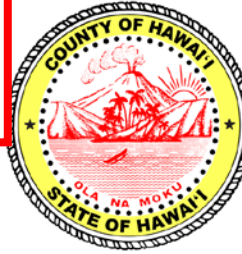
Comments: Energy storage systems integrated with PV are more complex than traditional grid-connect PV systems without batteries. As a result, we have experienced significant delays in getting permits approved by the county. It seems county inspectors are not familiar with some of the technology we use and misunderstand how the system is designed and operates. It requires significant back-and-forth explaining and re-explaining the systems before the inspector passes the installation, all of which could be avoided with a simple training for the county inspectors. As the new grid-interconnection policies with the utility (namely customer self supply) necessitate the use of an energy storage system, we as well as other solar contractors will be installing more and more of these systems. Battery technology has improved and continues to advance very rapidly. In order to keep up with the growing number of battery-integrated PV systems, we see it necessary to have an education program in place for the County workers. This will require funding, but is a necessary part of the development of our energy infrastructure. Just as inspectors are trained on electrical wiring and fire safety, they need to be trained on battery systems which are becoming a more fundamental part of homes and businesses' electrical infrastructure.

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

Do not reply to this email. This inbox is not monitored. For assistance please email webmaster@capitol.hawaii.gov

Harry Kim
Mayor

LATE



LATE

Frank DeMarco
Director

Wil Okabe
Managing Director

Allan Simeon
Deputy Director

County of Hawai'i
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LATE

February 9, 2017

Representative Chris Lee Chair, Representative Nicole Lowen Vice Chair and Members of the House Committee on Energy & Environment Protection

RE: Support Passage of HB 1543

Dear Chair, Vice Chair and Members of the Committee;

As the Chief Electrical Inspector for Hawaii County Department of Public Works in charge of Reviewing, Permitting and Enforcement of all Renewable Energy installations on the Island of Hawaii, we are in support of passage of HB 1543.

Hawaii County has been the front runner in Renewable Energy installations from the beginning and with today's technology advancements in both energy production and storage products, regulation of these installations has become more problematic. Education on product development, code development and installation guidelines have been our greatest challenge as limited funding is available to educate our Permitting and Enforcement personnel. This usually equates to delays in both permitting and inspections until more information is acquired. Our Electrical codes are constantly being upgraded to this new technology but are usually years away from being adopted into law. This again relates to enforcement of codes that may not reflect the latest in what is being installed thus creating more confusion and roadblocks for the installers and the industry in general.

We strongly support the passage of HB 1543 which should help provide much needed funding for education of our permitting and enforcement personnel which ultimately will benefit the entire Renewable Energy Industry and Hawaii consumers.

Thank you for your consideration of these comments.

With Regards,

Wayne Saiki
Chief Electrical Inspector

LATE

LATE

LATE

Brian Yahata

From: Lyman Morikawa <lyman@mai-hawaii.com>
Sent: Sunday, February 12, 2017 10:26 PM
To: Brian Yahata
Subject: RE: HB1543 FW: Big news out from The Solar Foundation today

Aloha Brian,

The National Electrical Code (NFPA 70) is recognized nationally and updated every three years. The primary goal is for fire and electrical safety of personnel and structures. The latest code is dated 2017. The Counties in Hawaii are on the 2008 code (there have been 2011, 2014, and now 2017 editions since). The revisions to the code reflect incidences, clarifications, and technological advances.

The renewable industry has experienced tremendous changes due to improvements in technology.

It is imperative that people involved with this Code keep abreast of these changes and clarifications. This involves engineers, electricians, and personnel in the enforcement and approval process.

This takes individual effort and training.

We recommend that the National Electrical Code be adopted for the year in which it takes effect on a Statewide basis. In the past, different Counties adopted different editions that created confusion among the contractors working in each County.

This is also an issue for the Fire, Building, and other codes and standards. A standards group at the State level can achieve this.

By doing this, those involved will need to be knowledgeable and will their raise the skill level.

Hope this helps,

Lyman Morikawa, PE
Morikawa & Associates, LLC
Tel OFC: (808) 572-1745
FAX OFC: (808) 572-6323 or EFAX:(808) 442-0978
Cell: (808) 870-5588



LATE **LATE** **LATE**

February 13, 2017

Representative Chris Lee Chair, Representative Nicole Lowen Vice Chair and Members of the House Committee on Energy & Environment Protection

RE: Support Passage of HB 1543

Dear Chair, Vice Chair and Members of the Committee;

As vice-president of Renewable Energy Services, Inc. and in charge of the day to day work of installing solar energy systems for our clients in the county of Hawaii, I see the real need for our State and County inspectors to receive specialized training on the energy equipment and technologies that make up the renewable energy industry.

In order for these systems to be safe and the permitting process efficient it is critically important that State and County inspectors have an understanding of this technology that is up to date and current with the various types of batteries and power conversion equipment being used today.

I strongly support the passage of HB 1543 for the training of State and County employees responsible for permitting and inspecting these systems which will benefit the consumer, the industry and help the State achieve it's future energy goals.

Thank you for the opportunity to testify.

Roland Shackelford
Vice-President
Renewable Energy Services, Inc,
808-938-9239
roland@renewableenergy.com