



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

DAVID Y. IGE
GOVERNOR

LUIS P. SALAVERIA
DIRECTOR

MARY ALICE EVANS
DEPUTY DIRECTOR

No. 1 Capitol District Building, 250 South Hotel Street, 5th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804
Web site: www.hawaii.gov/dbedt

Telephone: (808) 586-2355
Fax: (808) 586-2377

Statement of
LUIS P. SALAVERIA
Director
Department of Business, Economic Development, and Tourism
before the
HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

Tuesday, February 3, 2015
8:30 AM
State Capitol, Conference Room 325

in consideration of
HB759
RELATING TO COOLING SYSTEMS IN PUBLIC SCHOOL FACILITIES.

Chair Lee, Vice Chair Lowen, and Members of the Committee.

The Department of Business, Economic Development & Tourism (DBEDT) offers comments on this measure which directs that DBEDT consult with the Department of Education (DOE) and other state agencies to conduct a comprehensive study and develop a master strategy for the cooling of all public schools.

DBEDT has worked with the DOE on a number of efforts, such as their High Performance Schools, and will continue to do so. At present the DOE has entered into a contract with an energy company to implement the *Ka Hei* sustainable energy program. This multiyear effort will address a number of concerns before the DOE. DBEDT is ready to provide analysis on deployment options for high impact solutions consistent with our clean energy agenda and statutory responsibilities.

Thank you for the opportunity to provide this testimony.

DAVID Y. IGE
GOVERNOR



KATHRYN S. MATAYOSHI
SUPERINTENDENT

STATE OF HAWAII
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAII 96804

Date: 02/03/2015
Time: 08:30 AM
Location: 325
Committee: House Energy & Environmental
Protection

Department: Education

Late

Person Testifying: Kathryn S. Matayoshi, Superintendent of Education

Title of Bill: HB 0759 RELATING TO COOLING SYSTEMS IN PUBLIC SCHOOL FACILITIES.

Purpose of Bill: Requires DOE and DAGS, in consultation with the State Energy Office, to develop a cooling master strategy and comprehensive retrofitting study for public schools and to report findings to the Legislature. Authorizes general obligation bonds and appropriates funds for efficient classroom-cooling demonstration projects.

Department's Position:

The Department of Education (DOE) appreciates the intent of this bill however, because the DOE has already begun a number of initiatives to address the issue of cooling in our classrooms, we believe that this bill is not necessary at this time. Among the efforts the DOE currently has underway a heat abatement study of Campbell High School. This effort was a result of a collaboration with the Hawaii Natural Energy Institute (HNEI) in which the consultant team looked at a variety of different situations and how best to achieve comfortable temperatures inside the classrooms. The data gathering and analysis phases of this study have been completed and final results are expected in the next thirty days.

Once these results are analyzed, an implementation plan and strategy can be developed for all schools statewide and priorities can be determined.

DAVID Y. IGE
GOVERNOR



DOUGLAS MURDOCK
Comptroller

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES

P.O. BOX 119, HONOLULU, HAWAII 96810-0119

Late

WRITTEN TESTIMONY
OF
DOUGLAS MURDOCK, COMPTROLLER
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
TO THE
HOUSE COMMITTEE
ON
ENERGY & ENVIRONMENTAL PROTECTION
ON
FEBRUARY 3, 2015

H.B. 759

RELATING TO COOLING SYSTEMS IN PUBLIC SCHOOL FACILITIES

Chair Lee and members of the Committee, thank you for the opportunity to submit written testimony on H.B. 759.

Pursuant to Act 51, Session Laws of Hawaii 2004, the Department of Accounting and General Services (DAGS) no longer oversees repair and alterations for the Department of Education's public school facilities. Therefore, we respectfully request that all references to DAGS be removed from the language of this measure.

Thank you for the opportunity to submit written testimony on this matter.



1200 Ala Kapuna Street ♦ Honolulu, Hawaii 96819
Tel: (808) 833-2711 ♦ Fax: (808) 839-7106 ♦ Web: www.hsta.org

TESTIMONY BEFORE THE HOUSE COMMITTEE
ON ENERGY & ENVIRONMENTAL PROTECTION

DATE: TUESDAY, FEBRUARY 3, 2015

RE: H.B. 759 - RELATING TO COOLING SYSTEMS IN PUBLIC SCHOOL FACILITIES

PERSON TESTIFYING: WIL OKABE
HAWAII STATE TEACHERS ASSOCIATION

Wil Okabe
President
Joan Kamila Lewis
Vice President
Colleen Pasco
Secretary-Treasurer
Alvin Nagasako
Executive Director

The Honorable Chair Chris Lee, The Honorable Vice-Chair Nicole Lowen and the Members of the Committee:

The Hawaii State Teachers Association (HSTA) **supports HB 759** relating to Air-conditioning in public school facilities.

HSTA is the exclusive representative of more than 13,500 public and charter school teachers statewide. As the state affiliate, of the 3.2 million members of the National Education Association, HSTA believes that schools need air conditioning and that the condition of the schools physical plant impacts the health, safety, and welfare of students and staff members.

Our public schools are hot. At times, the heat index inches closer to 100 degrees during the summer, fall and spring. Students and teachers who work in these schools try to keep cool without the benefit of air conditioning in the classroom. At times, when a classroom becomes unbearable, teachers resort to turning the lights off, purchasing their own fans, and water breaks are frequent (if there is a water fountain available at the school) to name of few of the strategies to keep students comfortable as temperatures soar. Other schools are rotating students into air-conditioned libraries or computer labs to cool off, and some are even changing the day's lesson to avoid the heat and fatigue related to the environment.

It is well known that many of our educational facilities are in a state of decay, neglect, and/or deterioration. The association supports funding to modernize, expand, replace, and/or maintain these facilities with air conditioning in order to provide a safe, healthy, and effective teaching and learning environment for students and employees. The association further believes that the community, parent/guardians, students and education employees must be effectively involved in the development of the plans to modernize, expand and/or replace air-conditioning units.

Thank you for the opportunity to testify in **support of HB 759**.

To: Chairperson Chris Lee
Vice Chairperson Nicole Lowen
Members of the House Committee on Energy and Environmental Protection

Late

From: Corey Rosenlee

Subject: Support for HB759, RELATING TO AIR CONDITIONING IN PUBLIC SCHOOL FACILITIES

My name is Corey Rosenlee and I am a teacher at Campbell High School. I strongly support HB759. There is a direct correlation between temperature and student behavior and achievement. "Student performance, attitude, and behavior improved in proper air conditioned climates making it easier to concentrate and making them feel less drowsy and fatigued. Higher temperatures have a negative relationship with academic learning" (Nolan,1960). This year at Campbell temperatures in the classrooms reached over 90 degrees, with a high temperature of 100 degrees. At Waiialua High, Lahainaluna High, and Honowai Elementary teachers at these schools snapped pictures of their classrooms reaching over 90 degrees.

Many education experts and legislators would agree that our classrooms need air conditioning, and because of this all new schools in Hawaii are built with ac. The question is what to do with the approximately 240 schools that do not have ac, while we may agree that ac is important the cost has always been prohibitive with price ranges of 1 billion to 1.7 billion to ac all of Hawaii's classrooms, or \$115,000-\$250,000 per classroom. Much of the expense is to upgrade the electrical system at our schools which on average are 65 years old, and to insulate the rooms to avoid high electrical bills. After much research I believe we can bring down the cost of air conditioning Hawaii's classrooms by 90% by installing photovoltaic air conditioning. The pv ac works by installing pv on the roof of the classroom which then goes to a battery pack which powers the ac unit. Putting two ac units in a classrooms would cost between \$15,000-\$25,000. This is new technology and I hope this bill will test this technology out and if it works, as I believe it will, to implement in Hawaii's classrooms.

The one thing I would ask this committee to do is to amend the bill so that after the study is completed if certain criteria are met to act on the study. My great fear is that after the study is done and it states x many rooms need ac and it will cost x amount then the problem will seem so large we will just bury the issue and ten or twenty years down the road children will still be suffering in the heat.

Here are some recommendations that I ask be included in this bill for study:

HB759 Study on Air Conditioning

- A. Funds should be allocated to study a photovoltaic off the grid ac system:
 - a. Is solar ac system more cost effective in installation and electrical costs than a traditional system?

- b. How many classrooms have enough sunlight and roof space to accommodate the solar ac?
- B. The study should determine:
- a. How many classrooms currently don't have ac?
 - b. How many classrooms currently have enough electrical capacity to handle ac without the need to upgrade their electrical system?
 - c. Do classrooms that have an ac system need to be replaced because of age?
 - d. What is the average interior temperature of classrooms?
 - e. Are there other mitigating factors that would require ac(vog, noise, flies, smells, etc.)?