

TESTIMONY OF RANDY IWASE
CHAIR, PUBLIC UTILITIES COMMISSION
STATE OF HAWAII
TO THE
HOUSE COMMITTEE ON
FINANCE

February 24, 2017
11:00 a.m.

MEASURE: H.B. No. 957, H.D. 1
TITLE: RELATING TO HEAT ABATEMENT

Chair Luke and Members of the Committee:

DESCRIPTION:

This measure would authorize the Department of Education (“DOE”) and the Department of Budget and Finance (“B&F”) to borrow moneys from the Hawaii Green Infrastructure Loan Program for heat abatement measures at public schools. This measure would also appropriate general funds to make an initial repayment to the Hawaii Green Infrastructure Special Fund.

POSITION:

The Commission offers the following comments for the Committee’s consideration.

COMMENTS:

The Commission takes no position with respect to the proposal to authorize DOE and B&F to borrow moneys from the Hawaii Green Infrastructure Loan Program for heat abatement measures at public schools.

In previous testimony the Commission noted a concern that unintended consequences, including increased customer surcharges and/or a limited ability to achieve the State’s statutorily required Energy Efficiency Portfolio Standards, pursuant to section 269-96, HRS, may arise if general fund appropriations were only provided for initial loan repayments (FY 2017-2018) as proposed in Section 6 of this measure. The Commission maintains this general concern and notes that funds should be provided for the duration of the loan repayment.

Thank you for the opportunity to testify on this measure.



46-063 Emepela Pl. #U101 Kaneohe, HI 96744 · (808) 679-7454 · Kris Coffield · Co-founder/Executive Director

**TESTIMONY FOR HOUSE BILL 957, HOUSE DRAFT 1, RELATING TO HEAT
ABATEMENT**

**House Committee on Finance
Hon. Sylvia Luke, Chair
Hon. Ty J.K. Cullen, Vice Chair**

**Friday, February 24, 2017, 11:00 AM
State Capitol, Conference Room 308**

Honorable Chair Luke and committee members:

I am Kris Coffield, representing IMU Alliance, a nonpartisan political advocacy organization that boasts over 350 members. On behalf of our members, we offer this testimony in strong support of House Bill 957, House Draft 1, relating to heat abatement.

If school is cool, then our classrooms should be, too. Yet, last year, classroom temperatures regularly exceeded 90 degrees, reaching as high as 108 degrees in one Kalaheo High School classroom. Studies show that the achievement gap between cooled and non-cooled classroom environments can reach 17 percent on standardized tests. While local schools' outdated electrical infrastructure often cannot support traditional air conditioning technology, experiments in renewable energy cooling systems have lowered departmental projections for comprehensive cooling. We continue to believe that using available energy efficient technology—including on-grid, off-grid, microgrid, and photovoltaic technology—*should* reduce the cost of classroom cooling to \$20,000, or a total of \$140 million for the approximately 7,000 classrooms currently in need.

Therefore, we strongly support passage of this measure, which allows the Hawai'i State Department of Education and Department of Budget and Finance to borrow funds from the Hawai'i green infrastructure loan program to expand energy-efficient heat abatement in public schools. During the 2016 legislative session, lawmakers appropriated \$100 million for heat abatement, heeding Gov. David Ige's call to cool 1,000 classrooms by the end of the 2016-2017 school year. Available estimates of \$20,000 per classroom indicated, at the time, that \$100 million would cover heat abatement for thousands of classrooms beyond the governor's call. Unfortunately, contractor bids have been higher than expected. During the initial round of bidding, the "highest low bid," meaning the highest bid on a project that was also lower than all bids on the same project, was \$135,000. Other bids were even higher. Contech Engineering

submitted a bid of \$360,770, for example, to install solar-powered air conditioning in one portable at Ewa Beach Elementary, a project for which the lowest initial bid was \$102,000.

DOE officials subsequently rejected all exorbitant bids and expanded their pool of pre-qualified applicants. Since that time, the average cost of heat abatement projects has declined, with projects now running \$60,000 to \$70,000 per classroom. Contractors cite labor shortages and the cost of upgrading energy efficiency infrastructure as reasons for the extra expense, noting that policymakers also required the DOE, last year, to set a goal of becoming net-zero with regard to energy use by 2035. Today, the department officials plan to cool only 1,064 classrooms with the \$100 million appropriated last session, an average cost of \$93,985 per classroom. Last April, however, after NextEra Energy Hawai'i donated 33 hybrid solar air-conditioning units to Kaunakakai Elementary and Kilohana Elementary schools on Moloka'i, Greenpath Technologies Inc., a Honolulu-based renewable energy company, performed the installations at a cost of \$20,000 per classroom, verifying that classroom cooling could be accomplished sustainably and at significant cost savings. Thus, we believe the DOE's current cost projections are excessive. That said, the process of awarding contracts for heat abatement work during a booming construction market, along with the need to maximize renewable energy reliance throughout the state, clearly demonstrate the need for an additional, dedicated, and recurrent funding mechanism for the DOE's heat abatement program. Allowing green funds to be used for classroom cooling not only provides comfort to thousands of children at risk of heat exhaustion, but ensures that future cooling upgrades will comport with the state's goal of reducing carbon emissions. That said, we oppose amending this bill to dilute available loan funding for heat abatement by expanding the bill's language to fund renewable energy upgrades identified through the DOE's Ka Hei sustainability program for 241 schools.

Mahalo for the opportunity to testify **in support** of this bill.

Sincerely,
Kris Coffield
Executive Director
IMUAlliance



COLLEGE OF SOCIAL SCIENCES
HAWAII ENERGY POLICY FORUM
UNIVERSITY OF HAWAI'I AT MĀNOA

Hawaii Energy Policy Forum

Jeanne Schultz Afuvai, Hawaii Inst. for Public Affairs
Hajime Alabanza, Hawaii Solar Energy Association
John Antonio, US Dept of Agriculture
Karlie Asato, Hawaii Government Employees Assn
David Bissell, Kauai Island Utility Cooperative
Joseph Boivin, Hawaii Gas
Warren Bollmeier, Hawaii Renewable Energy Alliance
Michael Brittain, IBEW, Local Union 1260
Albert Chee, Chevron
Elizabeth Cole, The Kohala Center
Kyle Datta, Ulupono Initiative
Mitch Ewan, UH Hawaii Natural Energy Institute
Jay Fidell, ThinkTech Hawaii
Carl Freedman, Haiku Design & Analysis
Matthias Fripp, REIS at University of Hawaii
Ford Fuchigami, Hawaii Dept of Transportation
Justin Gruenstein, City & County of Honolulu
Dale Hahn, Ofc of US Senator Brian Schatz
Michael Hammett, SSRI at University of Hawaii
Senator Lorraine Inouye, Hawaii State Legislature
Randy Iwase, Public Utilities Commission
Brian Kealoha, Hawaii Energy
Darren Kimura, Energy Industries
Kelly King, Sustainable Biodiesel Alliance
Kal Kobayashi, Maui County Energy Office
Representative Chris Lee, Hawaii State Legislature
Gladys Marrone, Building Industry Assn of Hawaii
Stephen Meder, UH Facilities and Planning
Joshua Michaels, Ofc of US Rep. Colleen Hanabusa
Sharon Moriwaki, UH Public Policy Center
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Jeffrey Ono, Division of Consumer Advocacy, DCCA
Stan Osserman, HCATT
Darren Pai, Hawaiian Electric Companies
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Riley Saito, SunPower Systems
Scott Sen, Hawaiian Electric Companies
Joelle Simonpietri, UH Applied Research Lab
Ben Sullivan, Kauai County
Terry Surles, Hawaii State Energy Office, DBEDT
Lance Tanaka, Par Hawaii, Inc.
Maria Tome, Public Utilities Commission
Kirsten Turner, Ofc of US Representative Tulsi Gabbard
Alan Yamamoto, Ofc of US Senator Mazie Hirono

Testimony of Ray Starling
Chair, Energy Efficiency Working Group
Hawaii Energy Policy Forum

To the
House Committee on Finance

February 24, 2017 at 11:00 am in Conference Room 308

COMMENTS ON HB957 HD1, Relating to Heat Abatement

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

I am Ray Starling, Chair of the Energy Efficiency Working Group of the Hawaii Energy Policy Forum (Forum). The Forum, created in 2002, is comprised of over 40 representatives from Hawaii's electric utilities, oil and natural gas suppliers, environmental and community groups, renewable energy industry, and federal, state and local government, including representatives from the neighbor islands. Our vision and mission, and comprehensive "10 Point Action Plan" serves as a guide to move Hawaii toward its preferred energy goals and our support for this bill.

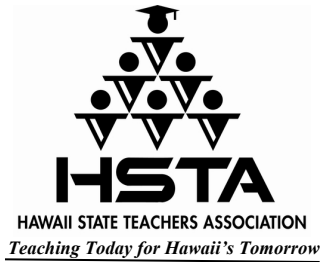
HB957 HD1 authorizes the DOE and B&F to borrow moneys from the Hawaii Green Infrastructure Loan Program for heat abatement measures at public schools, and appropriates general funds to make an initial repayment to the Hawaii Green Infrastructure Special Fund.

The Forum has discussed HB957 HD1 and is in full support of the bill's ultimate objective to provide heat abatement and efficiency for the public schools. However, the Forum is unable to reach a full consensus for or against the bill as currently proposed, so it offers the following comments to help the Committee in its deliberations:

Electric Ratepayers at Risk: The bill would authorize the DOE and B&F to borrow money from the Green Energy Market Securitization (GEMS) to fund heat abatement and efficiency measures at public schools. While such abatement measures are no doubt greatly needed, HB957 only authorizes funding for the state to make an "initial" repayment on the money borrowed from GEMS. It is not clear where the remainder of the loan repayments would come from. Since GEMS funds come from bonds secured solely by electric utility rate-payers rather than taxpayers, if the proposed loans are not paid by the state beyond the "initial" payment, ratepayers would be on the hook to make up any shortfall. The state should obligate itself to make all repayments on any DOE/B&F loans from the GEMS program.

Thank you for the opportunity to testify.

This testimony reflects the position of the Forum as a whole and not necessarily of the individual Forum members or their companies



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TESTIMONY BEFORE THE HOUSE COMMITTEE ON
FINANCE

RE: HB 957, HD 1 - RELATING TO HEAT ABATEMENT.

FRIDAY, FEBRUARY 24, 2017

COREY ROSENLEE, PRESIDENT
HAWAII STATE TEACHERS ASSOCIATION

Chair Luke and Members of the Committee:

The Hawaii State Teachers Association **strongly supports HB 957, HD 1**, relating to heat abatement.

It's hot in Hawai'i. According to the National Weather Service, our state set over 50 high temperature records in the summer of 2015, with the heat and humidity lingering well into the start of fall. In our schools, children and teachers alike became ill from the blistering conditions. Kalaheo High School science teacher Micah Pregitzer recorded temperatures as high as 108 degrees inside his classroom last August, telling reporters, "You're dripping in sweat when you're just sitting there grading papers by yourself with no students in the room. You get the room packed with 36, 38, sometimes 40 students, and it just boosts that temperature up even higher."

A recent study conducted by University of California at Los Angeles researchers showed that the percentile gap between students learning in air conditioned and non-air-conditioned environments can reach as much as 17 percent on achievement tests, clearly evincing the impact of a comfortable classroom environment on student success. In a longitudinal analysis contained in "Effects of the Physical Environment on Student Learning," moreover, Glen I. Earthman of Virginia Polytechnic Institute and State University found that students between 4th and 9th grade at demographically similar schools showed increased gains in reading vocabulary, total math, problem solving, math procedures, pre-writing, and editing at schools with air conditioning, as compared with peers from non-cooled schools.



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Earthman demonstrated that the longer and more consistently students are exposed to classroom cooling, the better and more stable their performance gains tend to be. Conversely, students exposed to thermal conditioning for only short or intermittent periods of time achieved less than their peers. These findings are supported by U.S. Department of Education sponsored research, which claims that proper cooling systems lead to better attitudes toward learning, fewer disciplinary problems, and sustained achievement.

Last year, lawmakers answered Gov. David Ige's call to cool 1,000 classrooms by appropriating \$100 million for heat abatement. At the same time, policymakers required the Hawaii State Department of Education to set a goal of achieving net-zero energy usage by 2035. While we had hoped that the \$100 million would extend cooling technology to thousands of classrooms throughout the state, unexpectedly high procurement bids have limited the reach of the state's funding. Currently, the DOE expects to cool only 1,064 classrooms with the \$100 million appropriation, an average cost of \$93,985 per classroom. This is unacceptable. Last April, NextEra Energy Hawai'i donated 33 hybrid solar air-conditioning units to Kaunakakai Elementary and Kilohana Elementary schools on Moloka'i. Greenpath Technologies Inc., a Honolulu-based renewable energy company, performed the installations at a cost of \$20,000 per classroom, verifying that classroom cooling could be accomplished sustainably and at significant cost savings.

Accordingly, we must find a dedicated and continual funding stream to extend heat abatement to all children in need. We believe that the current measure presents the best pathway forward, as it expands the DOE's heat abatement program through green infrastructure loans, thus guaranteeing both funding for future classroom cooling efforts and that such efforts will be implemented in an energy efficient manner. That said, we oppose any amendments to this bill that will reduce available loan funding for heat abatement, including expanding the bill's intent to include funding for renewable energy upgrades identified through the DOE's Ka Hei sustainability program.

School should be cool. To make our classrooms more suitable for student learning, the Hawaii State Teachers Association asks your committee to **support** this bill.



LATE

Hawaii Solar Energy Association
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**TESTIMONY OF THE HAWAII SOLAR ENERGY ASSOCIATION
IN REGARD TO HB 957 HD1, RELATING TO HEAT ABATEMENT
BEFORE THE
HOUSE COMMITTEE ON FINANCE
ON
FRIDAY, FEBRUARY 24TH, 2017**

Chair Luke, Vice-Chair Cullen, and members of the committee, my name is Hajime Alabanza and I represent the Hawaii Solar Energy Association, Inc. (HSEA)

HSEA **supports** HB 957 HD1. This measure seeks to borrow moneys from the Green Energy Market Securitization (GEMS) program for heat abatement measures at public schools.

While the GEMS program has already commenced work regarding heat abatement measures with the DOE and Office of Budget and Finance, we recognize that Hawaii's schools are in dire need of heat abatement measures. HB 957 HD 1 would give the GEMS program the increased scope it would need to fulfill this mission.

The Associated Press recently reported in September of 2015 that 93% of public schools in Hawaii do not have air conditioning units throughout the entire school. That same report used thermal imaging that revealed that some classrooms can reach well over 90 degrees Fahrenheit in the summer months.

A significant statutory change like the one proposed in HB 957 HD 1 would recover much of the cost of these installations and abatement measures through strategic financing through GEMS. Through its loan with the DOE's Ka Hei program, GEMS has already proven its capability to administer these types of funds.

We urge the committee to pass HB 957 HD 1.

Thank you for the opportunity to testify.