



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

**House Committee on Finance**

Tuesday, April 5, 2016  
2:31 P.M.  
Hawaii State Capitol, Room 308

**Senate Bill 3126, SD2, HD1, Relating to Public Schools**

Dear Chair Luke, Vice Chair Nishimoto, and Members of the Committee:

The Board of Education ("Board") voted to testify in support of the intent of Senate Bill 3126, SD2, HD1, which would authorize the issuance of general bonds and the use of funds from the Green Infrastructure Loan Program to implement cooling measures in public school classrooms, as well as require the Department of Education ("Department") to establish a goal of becoming net-zero with respect to energy use, establish microgrid pilot projects at public schools that also serve as emergency shelters, and expedite the cooling of all public school classrooms.

The Board has been actively monitoring the Department of Education's efforts to address heat abatement in Hawaii's schools and has been encouraging partnerships to bring relief to students, teachers, and staff as quickly as possible. The Board supports any funding that will allow the Department of Education to reach the goal of installing air conditioning in 1,000 classrooms by the end of the 2016 calendar year and to continue its heat abatement efforts.

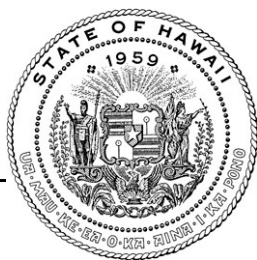
Section 3 of this measure, which requires the Department to establish a goal of becoming net-zero with respect to energy use by January 1, 2035, aligns with Board Policy 301.9 (formerly Board Policy 6710), which requires the Department to adopt a clean energy goal of utilizing 90% on-site renewable energy by 2040. The Board supports any program that will allow the Department of Education to reach its long-term sustainability, renewable energy, and energy efficiency goals.

Thank you for this opportunity to testify on behalf of the Board.

Very truly yours,

A handwritten signature in cursive script that reads "Lance A. Mizumoto".

Lance A. Mizumoto  
Chairperson



**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  
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Statement of  
**LUIS P. SALAVERIA**  
**Director**  
Department of Business, Economic Development, and Tourism  
before the  
**HOUSE COMMITTEE ON FINANCE**

Tuesday, April 5, 2016  
2:31 p.m.  
State Capitol, Conference Room 308

in consideration of  
**SB 3126, SD2, HD1**  
**RELATING TO PUBLIC SCHOOLS.**

Chair Luke, Vice Chair Nishimoto, and Members of the Committee.

The Department of Business, Economic Development, and Tourism (DBEDT) supports the intent of SB 3126, SD2, HD1. Sections 1-4 of this measure require the Hawaii Department of Education (DOE) to: (1) establish a goal of becoming net-zero by January 1, 2035; (2) establish a minimum of one microgrid pilot project in each county at public schools that are civil defense shelters; and (3) expedite the cooling of all public school classrooms to a temperature acceptable for student learning and submit related reports to the Legislature. Sections 5-9 are recommended by Governor Ige and provides for air conditioning, heat abatement and related energy efficiency measures at public schools using, in part, a loan from the Hawaii green infrastructure loan program. HD1 significantly amended this measure by replacing content related to appropriating general funds and authorizing general obligation bond funds to the Department of Education (DOE) for air conditioning, heat abatement and energy efficiency with the content of the sections noted above.

With respect to Part III Sections 6-9 of this bill, DBEDT strongly supports the deployment of cost-effective energy efficiency, which helps ensure continued progress towards our Energy Efficiency Portfolio Standards and the goals of the Hawaii Clean Energy Initiative. DBEDT would

also like to note that use of the Green Energy Market Securitization Bonds 2014 Series A bond sale proceeds for cost-effective energy efficiency is consistent with the “green bond” designation.

With respect to sections 1-4 of this bill, DBEDT supports DOE’s adoption of the Net Zero goal as this is consistent with the State’s clean energy objectives. We further support the deployment of microgrid projects when they are a required infrastructure investment to further our State’s adoption of clean energy in a reliable, safe and cost-effective manner.

However, DBEDT is concerned about the expansive nature of Section 4 of this bill which requires the DOE *in conjunction with* the Hawaii State Energy Office, amongst others, to examine the microgrid pilot projects to be deployed at each county, and identify how to maximize microgrid inclusion at all DOE public schools. DBEDT notes that the financial and human resources required to fulfill the duties of this bill under Section 4 are not fully addressed in its current budget. Hence, for these reasons, and to more clearly delineate DBEDT’s support role to DOE (the lead agency on implementing the will of this measure), we respectfully request the legislature to change “in conjunction with” to “with consultation of” in line 11, page 5.

DBEDT respectfully defers to the Hawaii Green Infrastructure Authority on the oversight and use of its funds; the Department of Education on the implementation of this measure; and the Department of Budget and Finance on the use of general obligation bond funds.

Thank you for the opportunity to offer comments on this bill.



DAVID Y. IGE  
GOVERNOR

TARA M. YOUNG  
EXECUTIVE DIRECTOR

## HAWAII GREEN INFRASTRUCTURE AUTHORITY

No. 1 Capitol District Building, 250 South Hotel Street, 5th Floor, Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-3868

Statement of  
**TARA YOUNG**  
**Executive Director**  
Hawaii Green Infrastructure Authority  
before the  
**HOUSE COMMITTEE ON FINANCE**

Tuesday, April 5, 2016  
2:31 p.m.  
State Capitol, Conference Room 308

in consideration of  
**SB 3126, SD2, HD1**  
**RELATING TO PUBLIC SCHOOLS.**

Chair Luke, Vice Chair Nishimoto, and Members of the Committee.

The Hawaii Green Infrastructure Authority (HGIA) supports SB3126 SD2, HD1. Sections 1-4 of this measure require the Hawaii Department of Education (DOE) to: (1) establish a goal of becoming net-zero by January 1, 2035; (2) establish a minimum of one microgrid pilot project in each county at public schools that are civil defense shelters; and (3) expedite the cooling of all public school classrooms to a temperature acceptable for student learning and submit related report to the Legislature. Sections 5-9 are recommended by Governor Ige and provides for air conditioning, heat abatement and related energy efficiency measures at public schools using, in part, a loan from the Hawaii green infrastructure loan program. HD1 significantly amended this measure by replacing content related to appropriating general funds and authorizing general obligation bond funds to the DOE for air conditioning, heat abatement and energy efficiency with the content of the sections noted below.

With respect to Part III Sections 6-9 of this bill, HGIA supports the application of Green Energy Market Securitization (GEMS) capital toward public sector energy efficiency improvements, as part of the overall program envisioned under SB3126 SD2, HD1. This is consistent with the HGIA's mission and charter, and will complement its portfolio of consumer

and commercial lending programs already in place. HGIA was originally founded with a broad mandate to accelerate adoption of renewable energy technology by deploying capital to consumers, for-profit, non-profit and public sector entities. HGIA is confident that this initiative will advance progress of our Energy Efficiency Portfolio Standards and the goals of the Hawaii Clean Energy Initiative. On March 15, 2016, the Public Utilities Commission confirmed in Order No. 33592 (Conditionally Approving Program Notification No. 6) that the use of GEMS funds for capital improvement program equipment, installation costs for air conditioning, energy efficiency lighting, and other energy efficiency measures related to heat abatement at public schools is permissible, provided that the legislature and Governor enact legislation authorizing an appropriation out of the GEMS Special Fund to loan such moneys to the DOE and Department of Budget and Finance.

HGIA would also note that a secondary advantage of a market-driven program like GEMS is that funds are available for deployment, subject to appropriation. Given the urgency of the situation in our classrooms, we believe that rapid execution is critical. HGIA has the resources and capabilities to work with HIDOE to bring relief to Hawaii's classrooms as quickly as possible should the legislation be enacted.

This proposed legislation is entirely aligned with HGIA's mission. HGIA will continue to work with the Department of Education on the implementation of the efficiency measures, and the Department of Budget and Finance on the use of general obligation bond funds. HGIA would like to work with stakeholders to ensure that improvements in energy efficiency at the DOE as a result of these investments are measurable and accountable.

Thank you for the opportunity to offer testimony in support of SB3126 SD2, HD1.



# TAX FOUNDATION OF HAWAII

126 Queen Street, Suite 304

Honolulu, Hawaii 96813 Tel. 536-4587

SUBJECT: MISCELLANEOUS, Use of GEMS Money to Fund Public School Heat Abatement

BILL NUMBER: SB 3126, HD-1

INTRODUCED BY: House Committees on Energy & Environmental Protection and Education

EXECUTIVE SUMMARY: Allows the Department of Education to borrow \$100 million from the GEMS loan program to cool the schools. Such action must be taken with great care to be sure that the legitimate expectations of bond holders and electric rate payers are not violated.

BRIEF SUMMARY: Authorizes the Department of Education and the Department of Budget and Finance, with the approval of the governor, to borrow \$100 million from the green infrastructure loan program, for capital improvement program equipment and installation costs for air conditioning, energy efficient lighting and other energy efficiency measures related to heat abatement at public schools. An additional \$30 million of general obligation bond proceeds is appropriated for the same costs.

EFFECTIVE DATE: Upon approval.

STAFF COMMENTS: This bill is sponsored by the Department of Budget and Finance, and is designated BUF-16 (16).

This bill concerns GEMS. GEMS, which stands for Green Energy Market Securitization, is a program that was adopted by our state government in Act 211, SLH 2013. It is codified in Hawaii Revised Statutes chapter 196, part IV.

The idea behind GEMS is that the state wanted to facilitate the buildout of “clean energy infrastructure,” which was seen as a necessary step to reaching a goal of 70% clean energy by 2030. (This was under Gov. Abercrombie’s administration, before the current goal of 100% clean energy by 2045 was signed by Gov. Ige.) GEMS is a financing program that provides low-cost capital to finance solar photovoltaic systems and other clean energy improvements for those who may otherwise have difficulty obtaining financing for these projects. Low-credit homeowners and renters, as well as nonprofits, are among those who qualify for project financing through GEMS. The “securitization” part refers to how this money was going to be raised. The plan was for the State to raise \$150 million on the bond market. Those dollars would then be loaned to these individuals and business entities so they could purchase renewable energy systems or other energy efficiency paraphernalia.

Remember that “raising the money in the bond market” means borrowing it. That money needs to be paid back, with interest. That’s where ordinary folks who get an electric bill every month come in. Buried in the electric bill is a “Green Energy Infrastructure Fee” collected by the utility and passed on to DBEDT. For residential customers, the fee was \$1.29 per month from December 2014 through June 2015. It went up to \$1.42 per month through December 2015, and

is anticipated to be \$1.30 per month for the first half of 2016. Commercial customers, of course, pay more.

This fee pays for principal, interest, and other charges. According to “Revenue Requirements Certificates” filed by DBEDT with the PUC in Docket 2014-0134, principal and interest on the bonds exceeds \$6.5 million every six months, and there are other financing costs, most of which were expended in the beginning to set up and market the bond issue. Now, according to official filings with the Public Utilities Commission in Docket 2014-0135, through September 30, 2015, exactly zero was deployed.

Apparently the loan program took a while to set up. Although the bonds were sold in November 2014 and the \$150 million was ready to be deployed then, the program didn’t even begin taking applications until March 2015 for nonprofits and June 2015 for individuals. As of September 30, there were around 250 applications received. There were some denials and some prequalification, but no final approvals were granted and no money went out. Meanwhile, over \$750,000 was spent on administrative costs since program launch, which doesn’t include the millions in upfront legal, accounting, financing, and marketing costs necessary for the bond issue.

Apparently GEMS is an attractive target for raiding because most of the \$150 million raised in the bond issue is still there. But three things need to be remembered: First, it’s a financing program, not a grant program. Second, it’s been established for specific purposes. Third, it is funded by all users of electricity through a “green infrastructure fee” on our electric bills.

The first point, that it is a financing program rather than a grant program, means that if we are using GEMS money we are borrowing it. If we use this \$100 million of GEMS money, we need to pay it back in the future. The Legislatures of tomorrow, then, will need to appreciate and provide for payment of this debt. Some would call this “kicking the can down the road.”

The second point is that the financing program is for specific purposes, namely to fund green infrastructure costs. This means clean energy technology like solar and wind; demand response technology; and energy use reduction and demand side management infrastructure. To fund the program, \$150 million was borrowed on the bond market. Now it is proposed that two-thirds of this, \$100 million, be used to cool the schools. Existing investors bought into the program to support saving the planet, and now we are tweaking the program so that most of the money goes to save school kids. Even if the money is loaned to the Department of Education at “affordable rates,” whatever those are, investors might not be happy about a significant deployment of the capital for purposes other than those mentioned in the GEMS statute. At a minimum we had better make sure that we are loaning the money at institutional market rates, and are not breaching covenants in the bond indenture.

Finally, the principal and interest on the GEMS bonds were and are being paid by a surcharge on utility bills. Does being an electric company customer have anything to do with classroom conditions in the public schools? If this is a problem affecting taxpayers in general, then it should not be funded by a raid on ratepayer money. And we already spend more than one out of



every five State dollars on education, to the tune of \$1.5 billion dollars a year. Why isn't that enough to keep our children from roasting?

Perhaps the better thing to do would be for the Board of Education or the Legislature to conduct a thorough investigation on what has caused this tragedy, for the results of the investigation to be thoroughly understood by lawmakers so they can fix the problems, and to focus the many good, hard-working people in our educational system on managing infrastructure competently.

Digested 4/2/2016



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

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**TESTIMONY FOR SENATE BILL 3126, SENATE DRAFT 2, HOUSE DRAFT  
1, RELATING TO PUBLIC SCHOOLS**

**House Committee on Finance  
Hon. Sylvia Luke, Chair  
Hon. Scott Y. Nishimoto, Vice Chair**

**Tuesday, April 5, 2016, 2:31 PM  
State Capitol, Conference Room 308**

Honorable Chair Luke and committee members:

I am Kris Coffield, representing IMUAlliance, a nonpartisan political advocacy organization that boasts over 350 members. On behalf of our members, we offer this testimony **in strong support of** Senate Bill 3126, SD2, HD1, relating to public schools.

If school is cool, 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. Using available energy efficient technology—including on-grid, off-grid, microgrid, and photovoltaic technology—could reduce the cost of classroom cooling to \$20,000, or a total of \$140 million for the 7,000 classrooms currently in need.

Therefore, we strongly support passage of this measure, which establishes a departmental goal of becoming net-zero with respect to energy use by January 1, 2035, advances microgrid pilot projects at public schools that also serve as emergency shelters, expedites the cooling of all public school classrooms, and authorizes the issuance of general obligation bonds and the use of funds from the Green Infrastructure Loan Program to implement cooling measures in public school classrooms.

That said, we note that Gov. Ige has called for implementation of immediate heat abatement in 2016, before the 2016-2017 school year begins. House Bill 2569, HD2, SD2 finances classroom cooling through \$100 million in general revenue (from unexpected federal Medicaid reimbursements) and \$30 million in general obligation bonds. The Senate position on heat abatement would also resolve concerns that have arisen about the use of the Green Infrastructure Loan Program to pay for classroom cooling, a use that some have argued does not align with the original intent of the fund, namely subsidizing clean energy technology, demand response technology, and energy use reduction. Certain departmental heat abatement initiatives, like repainting, may fall outside the parameters of this program. Moreover, it is our broad view that the acceleration of renewable energy technology by consumers, for-profit, non-profit, and public sector entities should be one of our state's highest priorities, and that capital dedicated to such advancement should be sustained and amplified. Using Medicaid reimbursement funds would not deplete our state's "green capital," but would accomplish the goal of making our schools cool as quickly as possible.

Department of Education officials have put forward a timeline requiring solicitation of contract bids this spring, in hopes that classroom cooling projects can be completed over summer, when schools are unpopulated. Therefore, we request that you include in your committee report language suggesting a rapid reconciliation of the House and Senate positions, so that funds for heat abatement may be released during the 2015-2016 fiscal year, as well as well as language indicating that the status of heat abatement and classroom and cooling should be reviewed in future legislative sessions, since the proposed funding may not cover all 7,000 classrooms in need, particularly as our temperatures—much like our sea levels, owing to climate change—continue to rise.

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

Sincerely,  
Kris Coffield  
*Executive Director*  
IMUAlliance

**Testimony before the  
House Committee on Finance  
April 5, 2016, 2:31 pm  
Conference Room 308**

**S.B. No. 3126, H.D. 1 – Relating to Public Schools**

**By Scott Seu  
Vice President, System Operation  
Hawaiian Electric Company, Inc.**

*Chair Luke, Vice-Chair Nishimoto and Members of the Committee:*

My name is Scott Seu. I am Vice President for System Operation at Hawaiian Electric Company. I am testifying on behalf of Hawaiian Electric and its subsidiary utilities, Maui Electric and Hawaii Electric Light (collectively “Companies”).

We support the elements of this bill that directly relate to cooling the classrooms for our State’s children, and also support the development of microgrids to the extent they can complement the operation of the regular grid and benefit all customers. We have concerns however, that the net zero energy requirement, if not approached holistically and in synch with other energy plans and policies, could lead to unintended negative consequences for the Department of Education (DOE) and other electric customers.

For example, if the net zero requirement drives the DOE to singularly focus on building as much PV as they can at all their school sites, they may face significant technical integration challenges that can be very expensive to work through. Or if the DOE determines that they can only meet net zero by building several larger scale PV farms at a handful of DOE sites, and the goal is applied very literally to require their consumption of this energy, then that could lead the DOE to have to advocate for energy wheeling which can negatively impact other customers and renewable generators. The net zero requirement in this bill also does not emphasize energy efficiency and conservation, nor consider how it meshes with programs such as demand response or time of use pricing.

The Hawaiian Electric companies are already committed to generate or procure 100% of the electricity they provide to customers from renewable energy sources by 2045. The more we can work in synch with our large customers, the greater our chance of succeeding as a whole. We recommend that the net zero requirement be reworked to address these concerns or be deleted from this measure.

Thank you for this opportunity to testify.

DAVID Y. IGE  
GOVERNOR



WESLEY K. MACHIDA  
DIRECTOR

RODERICK K. BECKER  
DEPUTY DIRECTOR

EMPLOYEES' RETIREMENT SYSTEM  
HAWAII EMPLOYER-UNION HEALTH BENEFITS TRUST FUND  
OFFICE OF THE PUBLIC DEFENDER

**STATE OF HAWAII**  
**DEPARTMENT OF BUDGET AND FINANCE**

P.O. BOX 150  
HONOLULU, HAWAII 96810-0150

ADMINISTRATIVE AND RESEARCH OFFICE  
BUDGET, PROGRAM PLANNING AND  
MANAGEMENT DIVISION  
FINANCIAL ADMINISTRATION DIVISION  
OFFICE OF FEDERAL AWARDS MANAGEMENT (OFAM)

TESTIMONY BY WESLEY K. MACHIDA  
DIRECTOR, DEPARTMENT OF BUDGET AND FINANCE  
TO THE HOUSE COMMITTEE ON FINANCE  
ON  
SENATE BILL NO. 3126, S.D. 2, H.D. 1

**LATE**

April 5, 2016  
2:31 p.m.

RELATING TO PUBLIC SCHOOLS

Senate Bill (S.B.) No. 3126, S.D. 2, H.D. 1, appropriates \$100,000,000 in green infrastructure special funds for FY 15-16 and \$30,000,000 in general obligation (G.O.) bond funds for FY 15-16 to the Department of Education (DOE) to address air conditioning, heat abatement, and related energy efficiency measures at Hawaii's public schools. The bill also provides that funds shall not lapse at the end of the fiscal year, provided that all green infrastructure special funds unencumbered as of June 30, 2018 shall lapse as of that date and unencumbered G.O. bond funds shall lapse as of June 30, 2017.

This bill also adds (in Section 3) a section to Chapter 302A, Hawaii Revised Statutes, Education, requiring the DOE to establish a sustainable schools initiative which has a goal of the DOE becoming net-zero with respect to its energy usage by January 1, 2035 and corresponding annual reports to the Legislature on achieving this goal.

The department strongly supports Part III of this bill which addresses heat abatement in Hawaii's classrooms. We defer to the DOE on the issues of becoming

net-zero in its energy usage initiatives in Section 3 and the mandates mentioned in Part II of this bill.

Part III of S.B. No. 3126, S.D. 2, H.D. 1, will allow DOE to expeditiously address heat abatement concerns, while employing energy efficiency measures to offset increased energy needs. S.B. No. 3126, S.D. 2, H.D. 1, will allow such projects to be implemented as quickly as possible and with least disruption to the affected schools to provide improved learning and teaching environments for public school students and teachers.

S.B. No. 3126, S.D. 2, H.D. 1, proposes to primarily utilize funds loaned from the Green Energy Market Securitization (GEMS) Program with G.O. bond funds also requested. Bond Counsel and the Department of the Attorney General have also opined to us that DOE may be a borrower of a GEMS loan. In addition, the Public Utilities Commission (PUC) issued a conditional approval of the GEMS loan to the DOE and Department of Budget and Finance (B&F), which was subject to the Legislature and Governor enacting legislation providing for the appropriation of the loan funds to the DOE and B&F. A copy of the PUC's conditional approval is attached.

Using the GEMS funds will allow the State to make the best use of its existing resources. The GEMS bonds were issued in November 2014 and the GEMS program is incurring millions of dollars of costs and the market for which the bonds were issued no longer exists to the extent originally envisioned. Therefore, the funds are currently available and we believe that the proposed use of the GEMS monies to fund heat abatement and cooling measures in Hawaii's public schools will expedite addressing heat related issues in the public schools and utilize the GEMS program for which it was intended. Although the terms of the loan are still being worked out, the funds will be loaned to DOE and B&F at reasonable rates and those funds can be made available to

DOE quickly through the requested emergency appropriations. Additionally, use of this alternative funding source will mean that these projects will not compete for the limited G.O. bond funds that must be used to address projects statewide.

We request several amendments to the bill. First, an appropriation to B&F of \$7,000,000 in general funds to address the GEMS loan repayment costs (similar to Section 5 of S.B. No. 3126). Under the original concept of this bill, B&F provides support to this effort as co-borrower of the loan and will be responsible for the loan repayments. Second, an amendment to Section 6 of the bill to provide the Director of Finance the authority to issue G.O. bond funds. Lastly, an amendment to Section 9 of the bill to provide lapsing dates for all means of financing of June 30, 2018.

B&F will continue to work with DOE and the Hawaii Green Energy Infrastructure Authority, who oversees the GEMS Program, to ensure proper implementation of this proposal.

Attachment

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Application of)

THE STATE OF HAWAII )  
DEPARTMENT OF BUSINESS, )  
ECONOMIC DEVELOPMENT, )  
AND TOURISM )

DOCKET NO. 2014-0135

For an Order Approving the Green )  
Infrastructure Loan Program )

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ORDER NO. 33592

CONDITIONALLY APPROVING PROGRAM NOTIFICATION NO. 6

PUBLIC UTILITIES  
COMMISSION

2016 MAR 15 P 3 21

FILED



BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF HAWAII

In the Matter of the Application of)  
THE STATE OF HAWAII )  
DEPARTMENT OF BUSINESS, )  
ECONOMIC DEVELOPMENT, )  
AND TOURISM )  
For an Order Approving the Green )  
Infrastructure Loan Program )

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Docket No. 2014-0135  
Order No. **33592**

CONDITIONALLY APPROVING PROGRAM NOTIFICATION NO. 6

By this Order, the commission conditionally approves Program Notification No. 6, subject to certain legislative action, as described below.

I.

Background

On February 11, 2016, the commission held an informal technical conference ("Conference") to allow the Hawaii Green Infrastructure Authority ("Authority") to, among other things, make a presentation to all docket parties regarding proposed future uses and deployments of Green Energy Market Securitization ("GEMS") funds.

At the Conference, the Authority shared its plan to deploy a \$100,000,000 term loan ("DOE Loan") to the Department of Education ("DOE") and Department of Budget and Finance ("B&F") for an Energy Efficiency/Heat Abatement Project ("DOE Project").<sup>1</sup> The DOE Project would utilize GEMS funds to finance the retrofiting of a number of DOE schools with energy efficiency measures and the installation of heat abatement measures, including air conditioners.

The Authority explained that the issuance and repayment of the DOE Loan would require legislative action. Specifically, the Authority explained that House Bill No. 2569 (2016), as amended ("HB 2569"), was introduced, in part, to appropriate \$100,000,000 from the Hawaii Green Infrastructure Special Fund ("GEMS Special Fund") to be loaned to DOE and B&F. Without this appropriation, the Authority explained that it would not be able to issue the DOE Loan. House Bill No. 2569 also authorizes DOE and B&F to borrow the money from the Authority and authorizes an appropriation out of the general revenues of the State for the initial DOE Loan repayment.

On February 23, 2016, the Authority filed Program Notification No. 6 to deploy capital to government agencies for commercial energy efficiency. At the Conference,

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<sup>1</sup>Commission Letter issued on February 8, 2016, attachment, at 8.

the Authority explained that the DOE Loan would be made pursuant to Program Notification No. 6.

## II.

### Findings and Conclusions

The commission finds that Program Notification No. 6 meets the minimum requirements as provided in Decision and Order No. 32318, filed September 30, 2014, which approved the GEMS Program. However, it is not clear that HB 2569 will be enacted. Further, the commission is concerned that Program Notification No. 6 does not provide sufficient assurances or safeguards to ensure repayment of the DOE Loan, as repayment is contingent upon legislative action, as discussed above.

Senate Bill No. 3126 (2016), as amended ("SB 3126"), was introduced as a companion bill to HB 2569, meaning that the two bills were introduced with the exact same content in order to allow both houses of the legislature to consider the proposal simultaneously. However, on February 29, 2016, the Senate Committee on Ways and Means ("WAM") adopted amendments to SB 3126 that would do the following:

- 1) Delete the authorization of DOE and B&F to borrow moneys from the Authority;
- 2) Delete the appropriation of general funds to make the initial loan repayment; and

3) Replace the GEMS Special Fund as the means of financing the DOE Project with a \$100,000,000 appropriation out of the general funds.<sup>2</sup>

Accordingly, the commission finds that Program Notification No. 6 should be approved, subject to the legislature and Governor enacting legislation that authorizes an appropriation out of the GEMS Special Fund to loan such moneys to DOE and B&F for capital improvement program equipment, installation costs for air conditioning, energy efficient lighting, and other energy efficiency measures related to heat abatement at public schools. In addition, the Authority shall not deploy any funds to state agencies under Program Notification No. 6 in excess of borrowing amounts authorized by the legislature.

The absence of such legislation obviates the need for Program Notification No. 6, as explained to the commission and docket parties by the Authority. Thus, in the event that such legislation is not enacted, this approval shall be deemed void and of no effect.

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<sup>2</sup>Senate Standing Committee Report No. 2787 (2016) ("SSCR No. 2787").

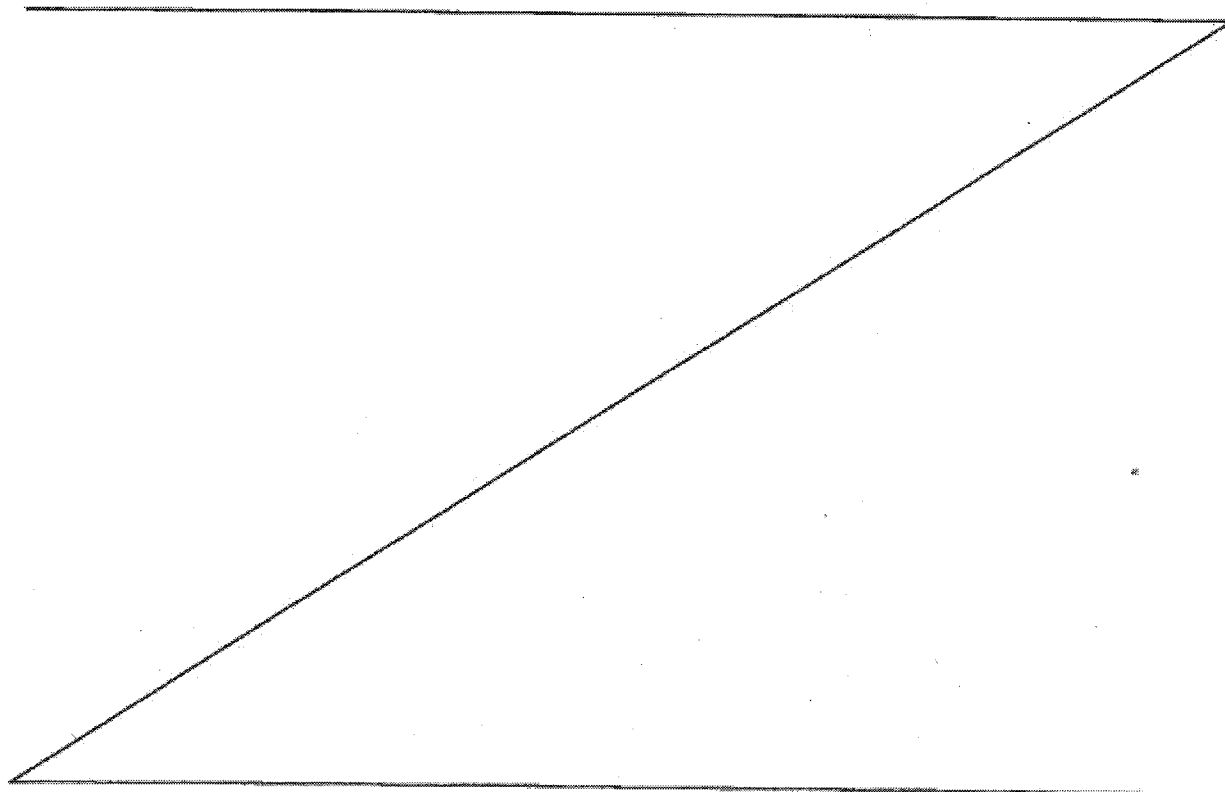
### III.

#### Orders

The commission orders:

1) Program Notification No. 6 is conditionally approved, provided that the legislature and Governor enact legislation authorizing an appropriation out of the GEMS Special Fund to loan such moneys to DOE and B&F for capital improvement program equipment, installation costs for air conditioning, energy efficient lighting, and other energy efficiency measures related to heat abatement at public schools.

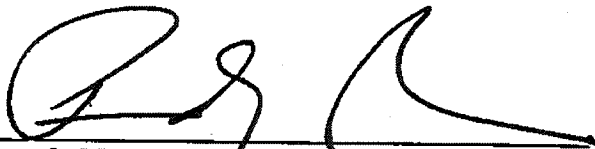
2) In the event that such legislation is not enacted, this approval shall be deemed void and of no effect.



3) The Authority shall not deploy any funds to state agencies under Program Notification No. 6 in excess of borrowing amounts authorized by the legislature.

DONE at Honolulu, Hawaii MAR 15 2016


PUBLIC UTILITIES COMMISSION  
OF THE STATE OF HAWAII

By   
Randall Y. Iwase, Chair

By   
Michael E. Champley, Commissioner

By   
Lorraine H. Akiba, Commissioner

APPROVED AS TO FORM:

  
Shannon Mears  
Commission Counsel

2014-0135.ljk

CERTIFICATE OF SERVICE

The foregoing Order was served on the date of filing by mail, postage prepaid, and properly addressed to the following parties:

JEFFREY T. ONO  
EXECUTIVE DIRECTOR  
DIVISION OF CONSUMER ADVOCACY  
DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS  
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Certificate of Service

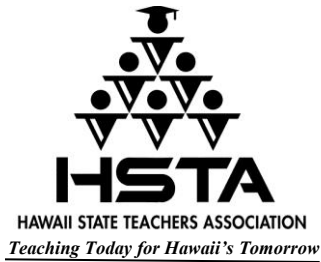
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TESTIMONY BEFORE THE HOUSE COMMITTEE ON  
FINANCE

RE: SB 3126, SD2, HD1 - RELATING TO PUBLIC SCHOOLS.

TUESDAY, APRIL 5, 2016

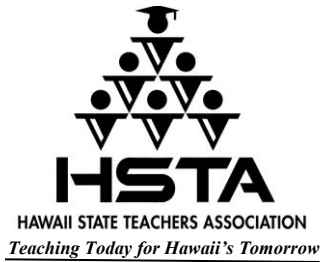
COREY ROSENLEE, PRESIDENT  
HAWAII STATE TEACHERS ASSOCIATION

Chair Luke and Members of the Committee:

The Hawaii State Teachers Association **strongly supports SB 3126, SD2, HD1,** relating to public schools.

It's getting hot in Hawai'i. According to the National Weather Service, our state set over 50 high temperature records this summer, 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 4<sup>th</sup> and 9<sup>th</sup> 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.

We applaud Gov. David Ige's call to cool 1,000 classrooms within the next two years. While previous department of education estimates put the cost of comprehensive air conditioning at \$1.5 billion, that figure has been fallen as investments in experiments with renewable energy technology have proven fruitful. Furthermore, in conversations with photovoltaic companies, advocates for cool schools have learned that employing off-grid DC-powered air conditioners, operated entirely from photovoltaic modules that store energy in power-saving batteries, could cost between \$15,000 to \$30,000 per classroom, a savings of approximately 70 percent from earlier departmental projections (discounting a monthly lease per-classroom payment that could be offset by the department's ongoing and all-encompassing renewable energy savings).

Yet, a number of questions remain about comprehensive classroom cooling, such as:

- What type of batteries and/or solar panels should be used for off-grid and renewable units, and how many of each? Enchanted Lakes Elementary is piloting a lead acid battery, while Kalaheo High School will be employing a salt water battery.
- How many thermal units (BTU) are needed to properly air condition classrooms of varying sizes?
- How should comprehensive heat abatement be funded, especially if the cost of a cooling system can be lowered by up to 75 percent? Administrators at Enchanted Lake Elementary believe that they can install air conditioning at a cost of \$5,000-\$6,000 per classroom, a cost at which, if scaled, could bring down the total for comprehensive statewide cooling for all 7,000 classrooms in need to approximately \$40 million.



HAWAII STATE TEACHERS ASSOCIATION  
*Teaching Today for Hawaii's Tomorrow*

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While HSTA supports the goals of this bill—including net-zero energy usage by 2035 for the DOE, microgrid pilot projects that may be scaled to other schools at a later date, expedited classroom cooling using a variety of energy technologies and financial instruments, and financing heat abatement through a loan from the green infrastructure loan program, we believe that our classrooms need cooling immediately, and therefore encourage you hastily reconcile differences with the Senate about the funding mechanism for heat abatement. Another measure moving forward—currently HB 2569, HD2, SD1—would appropriate \$100 million in general revenue (from federal Medicaid reimbursements) and \$30 million in general obligation bonds for air conditioning installation at our state's public schools this fiscal year. We are not opposed to replacing the contents of this bill with the current contents of SB 2569, HD2, SD1, if deemed necessary to fast-track classroom cooling financing, so that work can begin in advance of the beginning of the 2016-2017 school year. Most importantly, we ask you to appropriate the full \$130 million under current discussion, as such an amount may be enough to cool far more than the 1,000 classrooms called for by Gov. Ige, should renewable energy pilot programs currently underway prove cost effective and scalable. Finally, we urge you to ensure that the cooling initiatives launched by this bill are not discontinued in future years, if necessary to expand heat abatement to all 7,000 classrooms in need.

School should be cool. To improve air conditioning facilities and, in turn, boost student learning, the Hawaii State Teachers Association asks your committee to **support** this bill.



**LATE**

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

**Date:** 04/05/2016  
**Time:** 02:31 PM  
**Location:** 308  
**Committee:** House Finance

**Department:** Education

**Person Testifying:** Kathryn S. Matayoshi, Superintendent of Education

**Title of Bill:** SB 3126, SD2, HD1 RELATING TO PUBLIC SCHOOLS.

**Purpose of Bill:** Requires the Department of Education to: (1) Establish a goal of becoming net-zero with respect to energy use by January 1, 2035; (2) Establish microgrid pilot projects at public schools that also serve as emergency shelters; and (3) Expedite the cooling of all public school classrooms. Authorizes the issuance of general obligation bonds and the use of funds from the Green Infrastructure Loan Program to implement cooling measures in public school classrooms. (SB3126 HD1)

**Department's Position:**

The Hawaii State Department of Education (Department) is pleased to testify in support of SB 3126, SD2, HD1. This measure aims to provide funding for air conditioning (AC), heat abatement and related energy efficiency measures at public school classrooms. It also requires the Department to set a goal of becoming becoming net-zero with respect to energy use, producing as much renewable energy as the department consumes across all public school facilities, by January 1, 2035.

The \$130 million in proposed funding will allow the Department to reach the goal of installing AC in 1,000 classrooms, as well as boost efforts in implementing heat abatement and energy efficient measures towards cooling additional classrooms, while offsetting anticipated increases in energy use due to AC. The Department looks forward to completing this urgently needed work.

Thank you for the opportunity to testify in support of SB 3126, SD2, HD1.