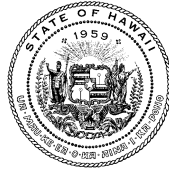


DAVID Y. IGE  
GOVERNOR



CURT T. OTAGURO  
COMPTROLLER  
AUDREY HIDANO  
DEPUTY COMPTROLLER

**STATE OF HAWAII**  
**DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES**  
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

WRITTEN TESTIMONY  
OF  
CURT T. OTAGURO, COMPTROLLER  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
TO THE  
COMMITTEES ON ENERGY, ECONOMIC DEVELOPMENT AND TOURISM/  
GOVERNMENT OPERATIONS

FRIDAY, MARCH 19, 2021, 3:05 P.M.  
CONFERENCE ROOM 224 VIA VIDEOCONFERENCE, STATE CAPITOL

H.B. 550, H.D.2

RELATING TO ENERGY EFFICIENCY.

Chairs Wakai and Moriwaki, Vice Chairs Misalucha and Dela Cruz, and members of the Committees, thank you for the opportunity to submit testimony on H.B. 550, H.D.2.

The Department of Accounting and General Services (DAGS) appreciates the intent of H.B. 550, H.D.2 which requires and establishes deadlines for state facilities, except smaller facilities and facilities at Aloha Stadium, to implement cost-effective energy efficiency measures. The DAGS offers the following comments for the committee's consideration:

- 1) The DAGS would like to emphasize that the projects performed within performance contracting typically qualify for the use of Capitol Improvement Project (CIP) funds; and when performance contracting projects are performed, these projects will be paid using future operating funds. This has the effect of paying for CIP qualified projects

with operating funds and will not decrease a program's expenditure of operating funds.

- 2) The DAGS would like to emphasize that when performance contracting projects are performed, the design and construction are not subject to bidding and costs are typically much higher.

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

**HB-550-HD-2**

Submitted on: 3/18/2021 10:36:15 AM

Testimony for EET on 3/19/2021 3:05:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Dean Shimomura	Testifying for DAGS	Comments	No

Comments:

I will be available for questions.



**Testimony to the Senate Committee on Energy, Economic Development, and  
Tourism**

**Senate Committee on Government Operation**

**Friday, March 19, 2021 at 3:05 P.M.**

**Written Testimony**

**RE: HB 550, HD 2, REALTING TO ENERGY EFFICIENCY**

Chairs Wakai and Moriwaki, Vice-Chairs Misalucha and Dela Cruz, and Members of the Committees:

The Chamber of Commerce Hawaii ("The Chamber") **supports** HB 550, HD2 which:

1. Requires and establishes deadlines for state facilities, except smaller facilities and facilities at Aloha Stadium, to implement cost-effective energy efficiency measures to help reduce greenhouse gas emissions;
2. Directs the Hawaii state energy office to collect utility bill and energy usage data for state-owned buildings and to make the data publicly available;
3. Establishes a goal for the State to achieve at least a twenty-five per cent reduction in the electricity consumption of state facilities;
4. Provides that certain agencies that perform energy efficiency retrofitting may continue to receive a certain amount of appropriations for energy expenditures; and
5. Beginning 7/1/2022, requires, where feasible and cost-effective, the design of all new state building construction to maximize energy and water efficiency, maximize energy generation potential, and use building materials that reduce the carbon footprint of the project.

The Chamber is Hawaii's leading statewide business advocacy organization, representing about 2,000+ businesses. Approximately 80% of our members are small businesses with less than 20 employees. As the "Voice of Business" in Hawaii, the organization works on behalf of members and the entire business community to improve the state's economic climate and to foster positive action on issues of common concern.

Hawaii continues to play a leading role in protecting our environment and increasing energy efficiency. We believe in the benefits of a sustainable future, but we must ensure that solutions that would affect the business community do not impede or create unintended burdens on entrepreneurs. Policies need to be shaped to create common



# Chamber *of* Commerce HAWAII

*The Voice of Business*

ground, especially so that businesses can have the flexibility to develop and create sound solutions to address these important issues.

As such, we believe this measure is leading by example to advance clean energy benefits in state facilities.

Thank you for this opportunity to provide testimony.



Before the Senate Committees on Energy, Economic Development and Tourism, and Government Operations

Friday, March 19, 2021, 3:05pm

Testimony in Support of HD550 HD2: Relating to Energy Efficiency

Chairs Wakai and Moriwaki, Vice Chairs Misalucha and Dela Cruz, and Members of the Committees:

Thank you for the opportunity to testify in support of House Bill 550 HD2.

Hawai'i Energy works to empower island families and businesses on behalf of the Hawai'i Public Utilities Commission (PUC) to make smart energy choices to reduce energy consumption, save money, and pursue a 100% clean energy future. Energy efficiency is the cheapest option to help us achieve our 100% clean energy goal by eliminating waste and being more efficient.

Hawai'i Energy applauds efforts to improve energy efficiency in State facilities. The State of Hawai'i has benefitted from a successful Energy Savings Performance Contract (ESPC) program that drove a significant level of energy savings projects between 2009 and 2015. Hawai'i Energy estimates that since 1996, Hawai'i government agencies have saved, on average, more than 5 million kilowatt hours a year, equating to over \$24 million in savings, with the majority of this coming through ESPCs.

ESPC procurements have significantly dropped since 2015, due to a number of potential factors, including previously completed projects, the expiration of the approved ESCO vendor list, and other non-energy priorities among others. With advances in technologies that increase efficiency coupled with the number of buildings that are still largely inefficient, opportunity remains for further improvement. ESPCs have demonstrated the ability to help the State save money without any capital budget allocation, which is now more important than ever.

This bill requires the State agencies to implement cost-effective energy efficiency measures, meaning that the savings will be greater than the cost of upgrade. Given Hawai'i has the highest energy rates in the country, energy efficiency can deliver significant cost savings which need to be harvested during these challenging budgetary times. Upgrades that cannot pay for themselves do not need to be implemented, ensuring fiscal responsibility.

Tackling energy use at state facilities will take time, manpower, and, in some instances, funding. State agencies have the flexibility to implement energy efficiency measures through ESPC, but it could also be funded through the Green Energy Market Securitization (GEMS) so that no upfront capital is required. The legislation does not limit state agencies from also funding the upgrades through capital improvement budgets if that is preferred.

As the State looks at ways to help local businesses recover from COVID-19, efficiency projects at state facilities can help to expand the economy and create opportunities for economic growth in the energy industry. We also need to support energy efficiency contractors who have been negatively impacted by COVID-19, including loss of business, project delays and staff reduction. Hawai'i Energy stands ready to

assist agencies with educational and engineering resources, as well as financial incentives to help launch these projects.

We appreciate the efforts made by the State Legislature, the Hawai'i State Energy Office and other State agencies, and various stakeholders to improve on the 2020 version. Thank you for the opportunity to testify in support of House Bill 550 HD2.

Sincerely,  
Brian Kealoha  
Executive Director  
Hawai'i Energy



Founded 1889

# PLUMBERS AND FITTERS LOCAL 675 UNITED ASSOCIATION



March 17, 2021

Senator Glenn Wakai, Chair, Committee on Energy, Economic Development, and Tourism  
Senator Bennette E. Misalucha, Vice Chair, Committee on Energy, Economic Development, and Tourism  
Senator Sharon Moriwaki, Chair, Committee on Government Operations  
Senator Donovan M. Dela Cruz, Vice Chair, Committee on Government Operations  
Joint Senate Committee(s) on Energy, Economic Development, and Tourism and Gov't Operations  
State Capitol, 415 South Beretania Street, Video Conference  
Honolulu, Hawaii 96813

Re: HB550 HD2 Relating To Energy Efficiency  
Friday, March 19, 2021 at 3:05 pm

Aloha Chair, Vice-Chair, and Committee Members;

Chartered in 1919, the Plumbers and Fitters UA, Local 675 is one of the oldest organized labor unions in Hawai'i and one of three 'licensed' skilled-construction trades, steeped in a rich history as one of Hawai'i's construction-industry pioneers.

Local 675 appreciates and supports the general intent of HB550 HD2, specifically as it pertains to requiring, where feasible and cost-effective, the design of all new state building construction to maximize water efficiency. Local 675 through the state's plumbing code, and in partnership with the State Building Code Council and the International Association of Plumbing and Mechanical Officials (IAPMO), continue to support efforts to implement plumbing codes and standards that further support state efforts to conserve natural resources and maximize efficiencies.<sup>1</sup>

Building upon recent legislation including HCR86, SD1 (2018) and Act 202 (HB444, CD1-2019), Local 675 continues to actively participate in and support public policies and/or codes and standards that offer new and improved methods, solutions and overall efficiencies in the way we deliver one of our most precious natural resources... our water.

One such code and standard is the **Water Efficiency and Sanitation Standard (WEStand)** published by IAPMO which is the first-ever ANSI<sup>2</sup> standard that focuses solely on achieving safe and efficient water use in both residential and non-residential buildings.

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<sup>1</sup> Benefits and Costs of Implementing the IAPMO Green Plumbing and Mechanical Code Supplement in Hawaii, UHERO, The Economic Research Organization at the University of Hawai'i, December 18, 2014.

<sup>2</sup> The American National Standards Institute (ANSI) is a private, non-profit organization that administers and coordinates the U.S. voluntary standards and conformity assessment system. **Founded in 1918**, the Institute works in close collaboration with stakeholders from industry and government to identify and develop standards- and conformance-based solutions to national and global priorities.





This standard would provide the kind of minimum requirements called for in this measure, that work to optimize built environment water use practices and corresponding provisions that maintain protection to public health and safety.

Local 675 will continue to support measures like HB550 HD2, that encourage the adoption of codes and standards like WESand, and other initiatives that promote water efficiency while protecting public health and safety.

Mahalo for the opportunity to testify.

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ANSI is not itself a standards developing organization. Rather, the Institute provides a framework for fair standards development and quality conformity assessment systems and continually works to safeguard their integrity. And as a neutral venue for coordination of standards-based solutions, the Institute brings together private- and public-sector experts and stakeholders to initiate collaborative standardization activities that respond to national priorities.



Email: [communications@ulupono.com](mailto:communications@ulupono.com)

SENATE COMMITTEES ON ENERGY, ECONOMIC DEVELOPMENT, & TOURISM AND GOVERNMENT  
OPERATIONS

Friday, March 19, 2021 — 3:05 p.m.

**Ulupono Initiative supports HB 550 HD 2, Relating to Energy Efficiency**

Dear Chair Wakai, Chair Moriwaki, and Members of the Committees:

My name is Micah Munekata, and I am the Director of Government Affairs at Ulupono Initiative. We are a Hawai'i-focused impact investment firm that strives to improve quality of life throughout the islands by helping our communities become more resilient and self-sufficient through locally produced food; renewable energy and clean transportation; and better management of freshwater and waste.

**Ulupono supports HB 550 HD 2**, which requires and establishes deadlines for state facilities, except smaller facilities and facilities at Aloha Stadium, to implement cost-effective energy efficiency measures; directs the Hawai'i State Energy Office to collect utility bill and energy usage data for state-owned buildings and to make the data publicly available; establishes a goal for the State to achieve at least a 25% reduction in the electricity consumption of state facilities; provides that certain agencies that perform energy efficiency retrofitting may continue to receive appropriations for energy; and, beginning 7/1/2022, requires, where feasible and cost-effective, the design of all new state building construction to maximize energy and water efficiency, maximize energy generation potential, and use building materials that reduce the carbon footprint of the project.

Ulupono supports energy efficiency measures to lower consumption across the State. As Hawai'i's energy issues become increasingly complex and challenging, we appreciate this committee's efforts to look at policies that reduce the State's overall energy demand, which in return should save the State, and taxpayers, money. We recommend adding in a deadline to meet the State's 25% reduction of electricity consumption goal.

Meeting the State's 100% renewable goal by 2045 will require everyone's commitment and it is important for the State government to lead the way.

Thank you for the opportunity to testify.

Respectfully,

Micah Munekata  
Director of Government Affairs

*Investing in a Sustainable Hawai'i*



**SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM  
SENATE COMMITTEE ON GOVERNMENT OPERATIONS**

March 19, 2021, 3:05 P.M.

Video Conference

**TESTIMONY IN SUPPORT OF HB 550 HD2**

Aloha Chairs Wakai and Moriwaki, Vice Chairs Misalucha and Dela Cruz, and Committee members:

Blue Planet Foundation **supports HB 550 HD2**, an important energy efficiency measure that will reduce the taxpayer burden of state energy bills, create new jobs in clean energy, and decrease our carbon emissions. These are critical objectives—particularly given the dramatic economic challenges that Hawai'i faces. What's more, passing this measure will demonstrate that the State of Hawai'i leads by example.

## **House Bill 550 is needed today**

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Energy efficiency is foundational to achieve Hawai'i's critical clean energy and climate objectives, such as the state's 100% renewable energy requirement, carbon neutrality goal, and commitments to the Paris climate targets. House Bill 550 amplifies existing state efficiency efforts and brings renewed focus to the successful Energy Savings Performance Contract program. The measure also brings needed transparency on state building energy use to make visible even more savings opportunities. Finally, HB 550 ensures that new construction anticipates our future energy and climate goals by maximizing feasible and cost-effective energy efficiency and energy generation design features and using building materials that reduce the carbon footprint of the project.

While the state has made some strides toward energy efficiency, considerable opportunities remain to decarbonize state buildings and reduce energy costs for taxpayers. The facilities that the State of Hawai'i owns and/or manages comprise one of the largest electricity users in the state. While the use of energy savings performance contracting—mainly during the period between 2009 and 2014—helped some agencies reduce their energy consumption, many agencies did not participate. Additionally, no new energy service contracts have been awarded by state agencies for nearly five years and, in some cases, some performance contracts were last awarded ten years ago. Since that time, technology has evolved significantly and is far more efficient, resulting in greater cost-saving benefits for the state.

[info@blueplanetfoundation.org](mailto:info@blueplanetfoundation.org)

55 Merchant Street 17<sup>th</sup> Floor • Honolulu, Hawai'i 96813 • 808-954-6161 • [blueplanetfoundation.org](http://blueplanetfoundation.org)

HRS 196-19 states “Agencies shall retire inefficient equipment on an accelerated basis where replacement results in lower life-cycle costs.” Instead, the State continues to utilize old and inefficient equipment in many facilities that do not meet this requirement and waste taxpayer money. House Bill 550 would help to identify new energy savings opportunities and revitalize the successful performance contracting program.

## House Bill 550 Helps Address the State’s Employment, Economic, and Budget Challenges

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Energy efficiency is not only foundational to achieving our critical climate and clean energy goals, it boosts employment, economic activity, and tax revenue. State energy efficiency projects will keep hundreds of people employed at a time when the State is struggling to find new economic engines without tourism. As indicated in the “Hawai’i Clean Energy Initiative 2008-2018” report, energy efficiency employed 5,100 people statewide.<sup>1</sup> A BW Research Partnership report on COVID-19’s economic crisis in August 2020 reported that Hawai’i lost nearly 3,800 clean jobs, or 25.2% of the clean energy workforce, since before the pandemic spread—including 1,704 in the energy efficiency sector.<sup>2</sup> These are well-paying jobs that could be regained through the adoption of HB 550.

The reduction in state energy costs resulting from the energy efficiency projects can help reduce the projected budget shortfall. Critically, investment in energy efficiency projects through innovative performance contracting do not require any state or capital improvement project funds and instead can be funded through the energy savings. Further, energy efficiency projects will generate tax revenues for the state through the construction projects subject to the state’s general excise tax.

## Conclusion

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House Bill 550 is a keystone energy efficiency measure that will reduce the taxpayer burden of state energy bills, create new jobs in clean energy, and decrease our carbon emissions. At its core, however, HB 550 is about more than just operating efficient buildings. This measure is a promise that the state will lead by example and serve as a model for residents and the private sector for our clean energy transformation. The new requirements in HB 550 will inspire and demonstrate to everyone—consumers, building owners and managers, contractors—on how we use energy, make changes, and construct our buildings today for generations of tomorrow. House Bill 550 shows how the State of Hawai’i is leading by example on how our energy culture is changing.

Thank you for the opportunity to provide testimony.

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<sup>1</sup> See <https://www.nrel.gov/docs/fy18osti/70709.pdf>

<sup>2</sup> See [https://bwresearch.com/covid/docs/BWRResearch\\_CleanEnergyJobsCOVID-19Memo\\_July2020.pdf](https://bwresearch.com/covid/docs/BWRResearch_CleanEnergyJobsCOVID-19Memo_July2020.pdf)

**HB-550-HD-2**

Submitted on: 3/18/2021 2:10:37 PM

Testimony for EET on 3/19/2021 3:05:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Ted Bohlen	Testifying for Climate Protectors Hawai'i	Support	No

Comments:

To: The Honorable Glenn Wakai, Chair, the Honorable Bennette Misalucha, Vice Chair and Energy, Economic Development and Tourism Committee Members, and

The Honorable Sharon Moriwaki, Chair, the Honorable Donovan Dela Cruz, Vice Chair and Members of the Committee on Government Operations

From: Climate Protectors Hawai'i (by Ted Bohlen)

Re: Hearing **HB550 HD2- RELATING TO ENERGY EFFICIENCY.**

Friday March 19, 2021, 3:05 p.m., by videoconference

Aloha Chairs Wakai and Moriwaki, Vice Chairs Misalucha and Dela Cruz, and Members of the Energy, Economic Development and Tourism and Government Operations Committees:

The Climate Protectors Hawai'i is a group focused on reversing the climate crisis. **The Climate Protectors Hawai'i STRONGLY SUPPORTS HB550 HD2, an important energy efficiency measure that will reduce the taxpayer burden of state energy bills, create new jobs in clean energy, and decrease our carbon emissions.**

The Climate Protectors Coalition is a group focused on reversing the climate crisis. As a tropical island State, Hawaii will be among the first places harmed by the global climate crisis, with more intense storms, loss of protective coral reefs, food insecurity, and rising sea levels destroying our shorelines. We must do all we can to reduce our carbon footprint and become carbon negative as soon as possible. The planet faces an existential climate crisis and we must act now! The IPCC (Intergovernmental Panel on Climate Change) says we have less than 10 years for worldwide climate action to avoid climate catastrophe. If we are to solve the climate crisis, it will require all of us working together. Hawaii can and should be a leader in showing the world the way forward towards a safe and sustainable climate and future. The sooner we inspire others to take action and lead by example, the better off the future will be for our children.

One of the areas where the State can lead in reducing greenhouse gas emissions is by installing energy efficient equipment and taking energy efficiency measures at State facilities. This bill would establish a goal of reducing electricity consumption at State facilities by at least 25%. For State building construction design, it would require, where reasonable and cost effective, maximizing energy and water efficiency, maximizing energy generation potential, and using building materials that reduce the carbon footprint of the project. This plan will help substantially in reducing greenhouse gases and addressing our existential climate crisis.

Please pass this bill! Mahalo!

Climate Protectors Hawai'i (by Ted Bohlen)



To: The Senate Committee on Energy, Economic Development, and Tourism  
and  
The Senate Committee on Government Operations  
From: Sherry Pollack, 350Hawaii.org  
Date: Friday, March 19, 2021, 3:05pm

**In support of HB550 HD2**

Aloha Chairs Wakai and Moriwaki, Vice Chairs Misalucha and Dela Cruz, and members of the EET and GVO committees,

I am Co-Founder of the Hawaii chapter of 350.org, the largest international organization dedicated to fighting climate change. 350Hawaii's 6,000 members **support HB550 HD2** which would reduce the taxpayer burden of state energy bills and decrease our carbon emissions.

One of the areas where the State can **lead in reducing greenhouse gas emissions** while at the same time **maximizing savings of taxpayer dollars**, is by installing energy efficient equipment and taking energy efficiency measures at State facilities. This bill would establish a goal of reducing electricity consumption at State facilities by at least 25%. For State building construction design, it would require, where reasonable and cost effective, maximizing energy and water efficiency, maximizing energy generation potential, and using building materials that reduce the carbon footprint of the project.

This plan will help substantially in reducing greenhouse gases and addressing our existential climate crisis while saving taxpayers money via energy efficiency.

Mahalo for the opportunity to testify in **support** of this very important legislation.

Sherry Pollack  
Co-Founder, 350Hawaii.org

**HB-550-HD-2**

Submitted on: 3/18/2021 12:36:58 AM

Testimony for EET on 3/19/2021 3:05:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Janet Pappas	Individual	Support	No

Comments:

Dear EET/GVO/WAM Chairs, Vice Chairs and Committee members,

I strongly support HB550 HD2.

Ensuring that all State buildings are energy efficient will encourage the public to become energy efficient as well. The goals in this bill to reduce electricity usage in State facilities by 25% (due date?) and require new buildings to meet certain energy efficiency standards are admirable, but we should do even better if possible. Why? Because energy efficiency saves taxpayers money: retro-fitting older buildings to be energy efficient saves us the cost of a new building. Energy efficiency is the most cost-effective way to reduce emissions and results in cleaner air and a healthier planet.

I recommend a podcast series on Spotify "How to Save a Planet", episode: "Breaking Buildings' Addiction to Fossil Fuels" to see how one man built a company to retrofit buildings for efficiency in all areas (fuel, heating/air conditioning, refrigeration, use of energy efficient building materials, etc.). He also employs a programmer who has put each building's data (age, size, fuel usage, # windows, etc., etc.) into a database that helps him determine the best options for each building); he has so far retrofitted 1000 buildings.

These projects, after thorough research and planning, should be started as soon as possible; the savings we will all enjoy will be immediate and benefit the entire state.

Please support this bill (HB550 HD2). Thank you for listening and for the opportunity to testify.

Sincerely,

Jan Pappas - Aiea, Hawaii



**HB-550-HD-2**

Submitted on: 3/17/2021 11:08:27 AM

Testimony for EET on 3/19/2021 3:05:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Kaikea K. Blakemore	Individual	Support	No

Comments:

Support. Hawaii is a coastal region. Climate change is real. Please set an example.



**LATE**

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

**Date:** 03/19/2021

**Time:** 03:05 PM

**Location:** CR 224 & Videoconference

**Committee:** Senate Energy, Economic  
Development, and Tourism

Senate Government Operations

**Department:** Education

**Person Testifying:** Dr. Christina M. Kishimoto, Superintendent of Education

**Title of Bill:** HB 0550, HD2 RELATING TO ENERGY EFFICIENCY.

**Purpose of Bill:** Requires and establishes deadlines for state facilities, except smaller facilities and facilities at Aloha Stadium, to implement cost-effective energy efficiency measures. Directs the Hawaii state energy office to collect utility bill and energy usage data for state-owned buildings and to make the data publicly available. Establishes a goal for the State to achieve at least a twenty-five percent reduction in the electricity consumption of state facilities. Provides that certain agencies that perform energy efficiency retrofitting may continue to receive appropriations for energy expenditures. Beginning 7/1/2022, requires, where feasible and cost-effective, the design of all new state building construction to maximize energy and water efficiency, maximize energy generation potential, and use building materials that reduce the carbon footprint of the project. Effective 7/1/2050. (HD2)

**Department's Position:**

The Hawaii State Department of Education (Department) provides comments on HB 0550, HD2.

Adequate funding is necessary to implement energy efficiency measures, such as those identified in this proposal. Significant up-front capital investments are required to effectively implement and achieve energy efficiency projects and goals.

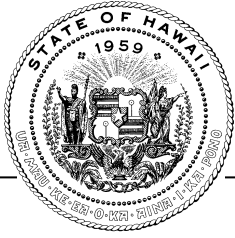
The Hawaii Green Infrastructure Authority's Hawaii Green Market Securitization (GEMS)

Loan Program has proven to be a cost effective way to implement energy efficiency for state agencies, while allowing those agencies to recapture most of the energy savings. The GEMS Loan Program requires agencies to justify the return on the up-front capital investments for cost-effective energy efficiency measures, which are financed by a low interest rate. As a result, the state agency, and not the third parties, receive most of the energy efficiency savings.

To date, the Department used \$46 million in GEMS loan financing to reduce energy consumption by 15 million kWh per year. These saving are recaptured by the Department instead of going to energy services company contracts.

Thank you for the opportunity to testify on this measure.

The Hawai'i State Department of Education is committed to delivering on our promises to students, providing an equitable, excellent, and innovative learning environment in every school to engage and elevate our communities. This is achieved through targeted work around three impact strategies: school design, student voice, and teacher collaboration. Detailed information is available at [www.hawaiipublicschools.org](http://www.hawaiipublicschools.org).



# HAWAII STATE ENERGY OFFICE STATE OF HAWAII

**LATE**

DAVID Y. IGE  
GOVERNOR

SCOTT J. GLENN  
CHIEF ENERGY OFFICER

235 South Beretania Street, 5th Floor, Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

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Fax: (808) 586-2536  
Web: energy.hawaii.gov

Testimony of  
**SCOTT J. GLENN, Chief Energy Officer**

before the  
**SENATE COMMITTEES ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM  
AND GOVERNMENT OPERATIONS**

Friday, March 19, 2021  
3:05 PM  
State Capitol, Conference Room 224 & Videoconference

In support of  
**HB 550, HD2**  
**RELATING TO ENERGY EFFICIENCY.**

Chairs Wakai and Moriwaki, Vice Chairs Misalucha and Dela Cruz, and Members of the Committees, the Hawai'i State Energy Office (HSEO) supports HB 550, HD2, which establishes deadlines for all state facilities 10,000 square feet and larger to implement cost-effective energy efficiency measures; provides that agencies that perform energy efficiency retrofitting may receive appropriations for such measures; authorizes HSEO to have access to and collect all utility bills and energy usage data for state-owned facilities and to make this data available to the public; establishes a goal of achieving at least a twenty-five percent reduction by 2025 in electricity consumption of state facilities; and requires, where feasible and cost-effective, the design of all new state building construction to maximize energy and water efficiency, maximize energy generation potential, and use building materials that reduce the carbon footprint of the project.

The objectives of energy efficiency, cost control, lower energy bills, and leading by example outlined in HB 550 HD2, are consistent with HSEO's mission "to promote energy efficiency... to help achieve a resilient clean energy economy" in accordance with Section 196-71(a), Hawai'i Revised Statutes. It is also consistent with the Chief Energy Officer's duties to "provide technical assistance to state and county agencies to

assess and implement projects and programs related to energy conservation and efficiency, renewable energy, clean transportation, energy resiliency, and related measures.”

HSEO agrees that energy efficiency is the most cost-effective way to reduce energy usage, and has worked over the years with a number of state agencies in Hawai'i that have participated, or are currently participating in, facility benchmarking, energy audits, and energy savings performance contracts. HSEO has observed that there are always more, and sometimes new, energy savings and bill reduction opportunities.

HSEO also agrees that designing new state buildings to maximize energy and water efficiency, identifying energy generation potential, and using building materials that reduce the carbon footprint, where feasible and cost-effective, are in alignment with the State's clean energy and decarbonization goals.

HSEO is working closely with Hawai'i Energy and state agencies to assess opportunities to reach a target goal of 25% by 2025 reduction from a 2005 baseline year. HSEO has consistently been measuring facility electricity reduction using 2005 as the baseline year. Also, the use of 2005 as the baseline year is consistent with the United Nations' baseline year and the Paris Agreement, which Hawai'i committed to support and to “be aligned with” in Part I of [Act 32 of 2017](#).

HSEO's analysis shows that since 2005, state agencies' total electricity consumption has declined by 17 percent. HSEO believes that, with Legislative and Administrative support, and the Energy Efficiency in State Buildings Project described in the attachment, that amount can increase to 25 percent by 2025.

In summary, HSEO supports HB550 HD2, to maximize the near-term savings and long-term energy performance of State buildings.

HSEO's comments are guided by its mission to promote energy efficiency, renewable energy, and clean transportation to help achieve a resilient, clean energy, decarbonized economy.

Thank you for the opportunity to testify.

**Energy Efficiency in State Buildings (EESB)**  
 25% energy use reduction by 2025

Proactive management of energy costs by State agencies is expected to result in cost savings as well as improved facility operation. The Energy Efficiency in State Buildings project takes a comprehensive and coordinated approach to this objective.

**Goal: Reduce state departmental energy use by 25% (from 2005 levels) by 2025.<sup>1</sup>**

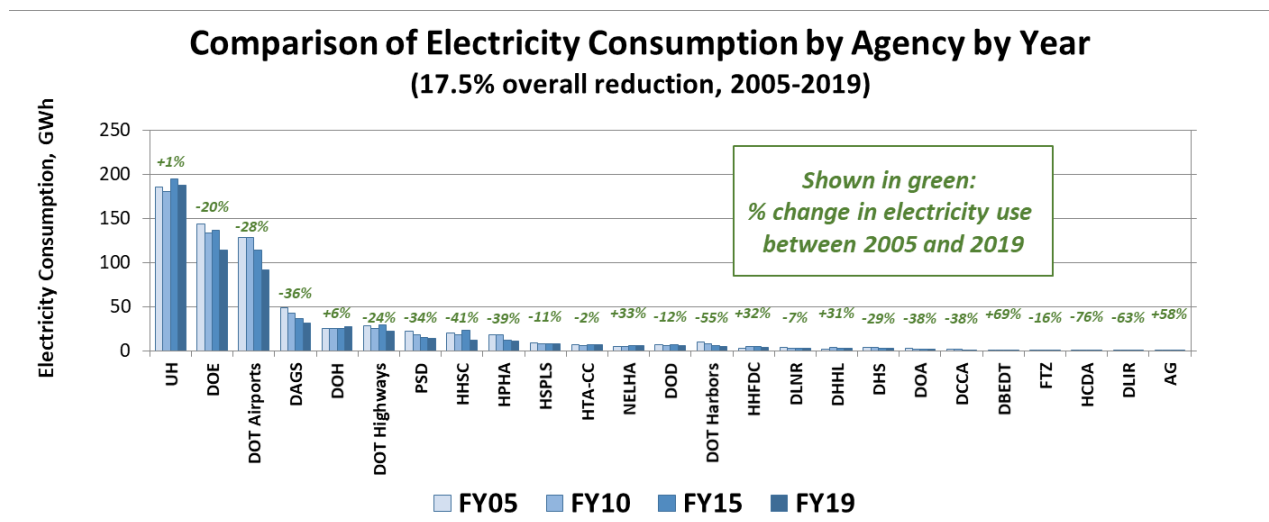
Hawai'i Revised Statutes, Section 196-30, requires that “each state department with responsibilities for the design and construction of public buildings and facilities” is to evaluate the energy efficiency of public buildings larger than 5,000 square feet or using more than 8,000 kilowatt-hours annually. The goal of 25% reduction by 2025 builds upon that requirement by setting a target amount and date.

**Coordination:**

Coordination will be provided by the Hawai'i State Energy Office (HSEO) and Hawai'i Energy.

**Status:**

A previous State (HSEO and partners) project benchmarked 416 public facilities, including more than 2,600 buildings covering more than 29 million square feet. By the end of 2019, the State agencies' energy use was 17.5% less than it was in 2005, the baseline year. The figure below shows the percentage change from 2005 to 2019 and the relative magnitude of electricity purchases by agencies.



**Background:**

Energy Performance Contracting in Hawai'i

Agencies have been pursuing energy retrofits since 1996. State and local government agencies' savings from the performance contracting program\*<sup>2</sup> (since its introduction by the State Energy Office in 1996) are expected to total an estimated \$1.1 billion in energy costs over the life of the contracts, and a cumulative amount of electricity equal to the amount used by 396,586 homes in one year. The projects comprise over 112 million square feet in 295 existing buildings and facilities. Hawai'i Revised Statutes, Section 196-30, also requires that every five years, major facilities be “retro-commissioned.”

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**Plan:**

HSEO coordinates provision of technical assistance and training with Hawai'i Energy to support State agencies in financing energy efficiency and cost reductions via operational changes, energy savings performance contracts, or other mechanisms.

Funding: Pursue federal funding and use of existing HSEO consultants to support technical assistance and to finance and incentivize the proposed work with state agencies.

Year 1 (2021-2022)

Identify highest potential ("Tier 1") State facilities for immediate action using the results of the previous benchmarking study, working with agencies that are among the highest energy users and have not yet achieved the 25% energy savings goal.

Tier 1 agencies include: University of Hawai'i, Department of Education, Department of Health, Department of Defense, Hawai'i Public Library System, and Hawai'i Health Systems Corporation. DAGS, as the building operations and manager for many state facilities, would also assist and participate in both Tiers 1 and 2. In partnership with HSEO and Hawai'i Energy, this State agency cohort would identify, address, and implement energy retrofit and operational savings opportunities.

Agency	FY05 kWh	FY19 kWh	Change FY05 - FY19 %	Maximum Annual Use with 25% Reduction kWh	Additional Reduction from 2019 Levels to Reach Goal kWh	Estimated Additional Savings \$
UH	186,135,017	187,264,956	0.6	139,601,263	47,663,693	14,156,117
DOE	143,491,511	114,391,027	-20.3	107,618,633	6,772,394	2,011,401
DOH	25,800,739	27,273,819	5.7	19,350,554	7,923,265	2,353,210
HSPLS	8,477,520	7,508,738	-11.4	6,358,140	1,150,598	341,728
DOD	6,703,102	5,885,274	-12.2	5,027,327	857,947	254,810

Year 2 (2022-2023)

Identify "Tier 2" State facilities with energy efficiency retrofit potential. For both Tier 1 and Tier 2 sites, identify demand response or other potential tariff /aggregator participation options to reduce State agency energy (electricity and fuel) costs. Tier 2 agencies would include: DBEDT, DLNR, FTZ, HTA-CC and NELHA. HHFDC and DHHL would be the housing and other agencies included in Tier 2.

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**Energy Performance Contracts in Hawaii as of October, 2020**

Agency	Year(s)	Contract Amount (\$)	Est. Savings Over Life of Contract (\$)
<b>UH-Hilo</b>	<b>1996-2012</b>	<b>\$6,402,695</b>	<b>\$14,630,066</b>
County of Hawaii	1997-2026	\$2,215,546	\$8,157,880
County of Kauai	1998-2012	\$525,965	\$1,205,990
City & County of Honolulu	2001-2025	\$11,900,205	\$36,066,761
<b>Hawaii Health Systems Corporation</b>	<b>2002-2022</b>	<b>\$21,936,997</b>	<b>\$55,766,364</b>
<b>Judiciary</b>	<b>2003-2012</b>	<b>\$1,474,406</b>	<b>\$9,785,036</b>
<b>DAGS Phase I</b>	<b>2009-2029</b>	<b>\$36,873,266</b>	<b>\$72,580,767</b>
<b>PSD</b>	<b>2010-2030</b>	<b>\$25,511,264</b>	<b>\$57,211,112</b>
<b>UH Community Colleges</b>	<b>2012-2032</b>	<b>\$34,207,392</b>	<b>\$37,000,000</b>
City & County HNL Kailua Wastewater	2013-2033	\$6,054,178	\$13,693,910
<b>DAGS Phase II</b>	<b>2013-2033</b>	<b>\$17,400,000</b>	<b>\$28,000,000</b>
<b>DOT</b>	<b>2013-2034</b>	<b>\$309,506,592</b>	<b>\$795,560,746</b>
Honolulu Board of Water Supply	2016-2036	\$33,125,398	\$56,846,668
	<b>Total</b>	<b>\$507,133,904</b>	<b>\$1,186,505,300</b>

Notes:

- <sup>1</sup> The commitment to the 25% reduction, and the use of 2005 as the baseline year, are consistent with the United Nations' baseline year and the Paris Agreement, which Hawai'i committed to support and to "be aligned with" in Part I of [Act 32 of 2017](#).
- <sup>2</sup> With an Energy Performance Contract, a State or County agency enters into an agreement with a private Energy Services Company (ESCO) to purchase and install an Energy Conservation Measure (possibly including photovoltaics). The agency uses a portion of the electricity bill savings from those energy conservation measures to, over time, reimburse the ESCO for the cost of the equipment and installation (and maintenance, if included in the agreement). This allows the private contractor to purchase and install equipment that reduces energy and water use in government-owned facilities, based on the future savings from the energy conservation measures, with no required up-front payment by the government agency. Under the agreement, the ESCO will guarantee the savings – and pay for any shortfall.