



## HOUSE BILL 2509, RELATING TO SCHOOLS

FEBRUARY 4, 2020 · HOUSE LOWER AND HIGHER  
EDUCATION COMMITTEE · CHAIR REP. JUSTIN H.  
WOODSON

**POSITION:** Support.

**RATIONALE:** The Democratic Party of Hawai'i Education Caucus supports HB 2509, relating to schools, which appropriates funds for the Department of Education to install air conditioning in public schools that prioritize the project.

If school is cool, then our classrooms should be, too. Yet, last year, classroom temperatures regularly exceeded 100 degrees and have reached as high as 108 degrees in one Kalaheo High School classroom in recent years. **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While local schools' outdated electrical infrastructure often cannot support traditional air conditioning technology, experiments in renewable energy cooling systems have lowered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 approximately \$6,000 per unit or a total of \$28.8 million for the roughly 4,800 classrooms currently in need.**

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 that \$100 million would cover heat abatement for thousands of classrooms beyond the governor's call. Unfortunately, contractor bids were 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.

At the time, however, 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, installed the units at a cost of \$20,000 per classroom, verifying that classroom cooling could be accomplished sustainably and at significant cost savings.

Last year, HIDOE officials announced an ambitious plan to lower air conditioning installation costs even further. Under a new, streamlined process, HIDOE is now giving school leaders the power to request an electrical assessment from the department to determine if their classrooms have the electrical capacity for additional air conditioning units. If they do, then **schools can budget for installation, partner with community groups for equipment donations and installation services, and install split AC and hybrid units that dramatically undercut previous heat abatement costs**. Quite frankly, this is what HIDOE leaders should have been doing all along.

**HB-2509**

Submitted on: 2/3/2020 4:09:07 AM

Testimony for LHE on 2/4/2020 2:30:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Jennifer Azuma Chrupalyk	Individual	Support	No

Comments:



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TESTIMONY BEFORE THE HOUSE COMMITTEE ON  
LOWER & HIGHER EDUCATION

RE: HB 2509 - RELATING TO SCHOOLS

TUESDAY, FEBRUARY 4, 2020

COREY ROSENLEE, PRESIDENT  
HAWAII STATE TEACHERS ASSOCIATION

Chair Woodson and Members of the Committee:

The Hawaii State Teachers Association **strongly supports HB 2509** which appropriates funds for the Department of Education to install air conditioning in public schools that prioritize the project.

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 in 2016, 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. 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.

In 2017, thanks to Hawaii lawmakers, legislation was passed to cool 1,000 classrooms by appropriating \$100 million for heat abatement. At the same time, other legislation required achieving netzero energy usage by 2035. Due to the replacement of fluorescent lights and the installation of much more energy efficient LED lights in our schools, plus other energy-saving measures, the electrical demand on our schools has diminished enough to now be able to install regular window A/C units, without having to rewire entire schools. This is great news and now installing A/C will cost a considerable amount less not only to install, but it will also not cause a higher energy usage that when we had fluorescent lights and other energy- draining appliances in our schools. HSTA is excited about this news and looks forward to cooling the remaining 7,000 classrooms that need cooled across our state.

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.

DAVID Y. IGE  
GOVERNOR



DR. CHRISTINA M. KISHIMOTO  
SUPERINTENDENT

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

**Date:** 02/04/2020  
**Time:** 02:30 PM  
**Location:** 309  
**Committee:** House Lower & Higher  
Education

**Department:** Education  
**Person Testifying:** Dr. Christina M. Kishimoto, Superintendent of Education  
**Title of Bill:** HB 2509 RELATING TO SCHOOLS.  
**Purpose of Bill:** Appropriates funds for the Department of Education to install air conditioning in public schools that prioritize the project.

**Department's Position:**

The Department of Education (Department) supports HB 2509 to improve learning environments for our students.

The Department would like to note that many school facilities lack the requisite electrical capacity to accommodate air conditioning units and will require electrical upgrades. As such, we ask the legislature to remain mindful of this fact as you deliberate the allocation of resources included in this measure.

Electrical upgrades include a range from minor adjustments to major overhauls and the associated range of costs for these projects. Minor upgrades can include rewiring and relocating outlets, while major upgrades can include new transformers and electrical distribution mechanisms.

Should the legislature decide to provide resources for upgrades, the Department recommends a separate appropriation be made for electrical upgrades in the measure.

Thank you for the opportunity to provide testimony on on HB 2509.

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).

## hashem2 - Michael

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**Subject:** FW: LHE Hearing Testimony

**From:** MHONG <meeganation@gmail.com>  
**To:** hashem2 <hashem2@capitol.hawaii.gov>  
**Subject:** RE: LHE Hearing Testimony

**LATE**

**LATE**

Good afternoon chair, vice-chair and members of the committee. I am Maggie Hong, founding member of Cool Our Keiki coalition, and am a fervent parent advocate to cool classrooms across the state, specifically starting with the 6 schools in my community, of which my children attend. All 6 principals have requested air conditioning as a CIP priority. I am here in support of bill HB2509 and ask for your vote in favor and support of bill 2509 that seeks appropriation for the Department of Education to install air conditioning in public schools that prioritize the project.

According to a DOE facility's letter sent to the Hawaii Kai Neighborhood Board dated December 1, 2019, the DOE has revised the heat abatement program, which states that they now organize schools into priority groups within a tiered system based on the school's 1) number of classrooms without ACs; and 2) socioeconomics. Their goal is to move them up a tier. We are also advocating for East Oahu schools because under this model, we will not be getting funding for our keiki and schools.

Hawaii residents have traditionally relied on trade winds and the island's balmy climate to stay comfortable; however, ACs are no longer a luxury. We have to respond to the impact of climate change in our classrooms because the human health and safety of our teachers and keiki should be *our first* priority. Not to mention that children just cannot learn effectively under hot and sticky conditions. Niu Valley Middle School, for example, had 300 cases of heat-related student visits to the nurse's office between August-November, 2019.

As for those naysayers who take pride in enduring their own childhood days with no ACs at public schools, UN Secretary-General António Guterres said something very poignant: "We have always lived through hot summers. But this is not the summer of our youth. This is not your grandfather's summer," as he announced the [data](#) from the Copernicus Climate Change Programme that showed that "July 2019 was on par with, and possibly marginally warmer than the previous warmest July, in 2016, which was also the warmest month ever" ([World Meteorological Association](#), 2019 para. 2). Scientific data indisputably marks 2014-2019 as on track to being the hottest years on record.

It is time for Hawaii public schools to follow mainland schools in maintaining a standard of a comfortable classroom temperature year-round. In California, the Desert Sands Unified School District determined that 77 degrees Fahrenheit for cooling and 68 degrees Fahrenheit for heating as the optimal temperature that will help maintain a "healthy, comfortable and productive environment for staff and students." It is interesting to note that they have stated that "any variations from these set points will require the Principal or senior Administrator's approval.

According to Florida's DOE's Department of Facilities, Facilities Construction Manager Mark Weigly said to his knowledge, he didn't know of any schools in Florida without ACs. He informed us It is up to the local school boards to determine a set classroom temperature as long as each school maintains a temperature of 78 degrees Fahrenheit or below during the summer months and no colder than 68 degrees during the winter months.

Conversely, classroom temperatures this past summer-fall months when school was in session hovered on average in the high 80s-90s Fahrenheit (not including humidity) at Koko Head Elementary. This is unacceptable. Studies have shown that 72 Fahrenheit is the optimal learning environment, temperature above 80 degrees we see student memory negatively impacted. We are seeing the impact of climate change on our

islands with extreme heat trends and NOAA only expects the trend to continue. We must respond to the needs of our children now. Let's keep them comfortable year-round.

Ultimately, Cool Our Keiki Coalition believes that all classrooms can be cooled for a reasonable amount and not the \$100,000 per classroom that resulted in wasteful spending on elaborate and expensive cooling systems, many of which have since been inoperable.

If we are truly serious about education in Hawaii, then we should invest in our school facilities to ensure our Keiki has a safe and optimal learning environment. Thank you.

Maggie Hong