
A BILL FOR AN ACT

RELATING TO ENERGY.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. The legislature finds that the current governor
2 has pledged to address the challenges facing Hawaii's
3 classrooms, including soaring temperatures, outdated
4 infrastructure, and costly electric bills throughout the State.

5 The legislature also finds that the University of Hawaii is
6 progressing toward becoming energy net-zero by producing as much
7 renewable energy as the system consumes by 2035. This progress
8 will reduce the university's energy costs, contribute to
9 Hawaii's clean energy goals, and make better use of limited
10 resources. A similar opportunity to save on long-term energy
11 costs and maximize limited resources exists in Hawaii's
12 elementary, middle, and high schools. The department of
13 education spends approximately \$48,000,000 annually for
14 electricity. By implementing a program similar to the
15 university program, the large sum of money used for utility
16 services could be redirected broadly on projects that will
17 improve the learning environment, such as cooling solutions,
18 better learning tools for students, enriching sports, arts, and



1 extracurricular programs, and increasing pay to hire and retain
2 better teachers.

3 Temperatures in Hawaii's kindergarten through grade twelve
4 classrooms can reach over one hundred degrees Fahrenheit, far
5 exceeding the ideal conditions in which children and teachers
6 are effectively able to perform. Reducing temperatures in hot
7 classrooms is critical to increasing student learning. A recent
8 peer-reviewed study by the Harvard School of Public Health, "The
9 Impact of Green Buildings on Cognitive Function," found that
10 cognitive scores were over one hundred per cent higher in
11 enhanced green building conditions with adequate ventilation
12 that lowered carbon dioxide levels and provided a comfortable
13 indoor environment. Other recent studies have shown increases
14 in cognitive function and student performance in classrooms with
15 daytime light emitting diode lighting over traditional
16 fluorescent or incandescent lighting.

17 Installing more efficient lighting, natural ventilation,
18 and integrating innovative renewable technologies such as solar
19 panels and batteries can help power schools, reduce electricity
20 costs, and improve student performance. Powering new classroom
21 air conditioning units with solar panels and batteries without



1 the need to connect to the electric grid can also reduce costs
 2 by eliminating the need for costly campus electrical upgrades,
 3 and will not add significant new costs to public school electric
 4 bills. Therefore, the legislature finds that it is in the
 5 public's interest to maximize the use of effective renewable
 6 technologies to reduce air conditioning installation and
 7 operating costs.

8 The purpose of this Act is to accelerate the goals of the
 9 department of education to cool Hawaii's schools, reduce energy
 10 costs, meet Hawaii's clean energy goals, and provide all
 11 students with better classrooms in which to learn.

12 SECTION 2. Chapter 302A, Hawaii Revised Statutes, is
 13 amended by adding a new section to part VI to be appropriately
 14 designated and to read as follows:

15 "§302A- Sustainable schools initiative. (a) The
 16 department shall establish a goal of becoming net-zero with
 17 respect to energy use, producing as much renewable energy as the
 18 department consumes across all public school facilities, by
 19 January 1, 2035.

20 (b) The department shall use the amount and value of
 21 energy consumed by the department across all public school



1 facilities during the 2015-2016 fiscal year as the benchmark for
2 measuring the department's progress toward the energy usage goal
3 set forth in subsection (a).

4 (c) The department shall submit an annual report that
5 shall include information on:

6 (1) The overall progress toward the net-zero energy goal
7 set forth in subsection (a);

8 (2) Its plans and recommendations to advance the net-zero
9 energy goal set forth in subsection (a); and

10 (3) Any challenges or barriers encountered or anticipated
11 by the department in meeting the net-zero energy goal
12 set forth in subsection (a).

13 (d) The department shall expedite the cooling of all
14 public school classrooms to a temperature acceptable for student
15 learning. When implementing classroom cooling measures, the
16 department, and any contractor hired to implement classroom
17 cooling measures, shall maximize energy efficiency and
18 installation and operating cost savings over the entire life of
19 the project.

20 (e) Pursuant to this section, the department shall include
21 in the report the status of the implementation of measures taken



1 to cool public school classrooms as required by subsection (d).

2 The report shall include the following information:

3 (1) The number of completed classrooms in which cooling
4 measures were implemented and the number of classrooms
5 remaining that require cooling;

6 (2) The different types of cooling measures implemented;

7 (3) The approximate cost per classroom for planned cooling
8 measures, including installation, upgrades, equipment,
9 maintenance, and projected operating costs over the
10 life of the installed cooling measures;

11 (4) The approximate cost per completed classroom for
12 cooling measures implemented, including installation,
13 upgrades, equipment, maintenance, and projected
14 operating costs over the life of the installed cooling
15 measures;

16 (5) The number of completed classrooms in which energy
17 efficiency measures were installed or implemented and
18 the number of classrooms remaining that require energy
19 efficiency measures; and

20 (6) The different types of energy efficiency measures
21 installed or implemented.



1 (f) The department shall report its findings and
2 recommendations, including any proposed legislation, to the
3 legislature no later than twenty days prior to the convening of
4 each regular session."

5 SECTION 3. New statutory material is underscored.

6 SECTION 4. This Act shall take effect upon its approval.



Report Title:

Department of Education; Net-Zero Energy Use; Classrooms;
Cooling; Energy

Description:

Requires the Department of Education to establish a goal of becoming net-zero with respect to energy use by January 1, 2035. Requires the Department of Education to expedite the cooling of all public school classrooms. (CD1)

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