At the heart of the Hawai‘i State Department of Education’s (DOE) commitment to serving our students is a belief that we must enhance the schools of today to help prepare Hawai‘i’s keiki for the opportunities of the future.

Currently, the DOE spends more than $62 million a year on electricity, gas, water and sewage fees – a 50 percent increase over the past 10 years. The more we spend on utility costs, the fewer funds there are to direct toward accomplishing our core mission of fostering student success. We are excited to improve our sustainability profile by lowering energy expenses, protecting the environment and reinvesting funds into the classroom.

Now is our time to move toward a more sustainable future.

The DOE’s Ka Hei program will integrate innovative energy technology with meaningful learning experiences, all while reducing energy costs. As a comprehensive energy and sustainability program, Ka Hei will transform the learning environment, reduce operational expenses, and provide engaging educational opportunities for our students and community.

Through a combination of energy efficiency measures, clean energy generation, and a comprehensive sustainability program, Ka Hei will improve the learning environment so students and teachers can perform at their best. The DOE is partnering with Chevron Energy Solutions to ensure success of this multi-year program.

Ka Hei: Background

Ka Hei, a specific type of snare made with ropes, is what the Hawaiian god Maui used to capture the sun in the Hawaiian tradition. Ka Hei also means “to absorb as knowledge or skill.” Coupled with revamped facility upgrades, an important component of Ka Hei is the suite of educational opportunities that will help engage students and staff in energy awareness and STEM education.

The DOE’s Hawaiian Language Immersion Program educational specialists selected the name for this ambitious program. Ka Hei conveys our opportunity to not only harness the power of the sun to power our schools, but our goal to empower our students and teachers to adapt new ideas about sustainability for the benefit of our greater community.

Rooftop solar PV at Kaimuki High School
**Key Objectives**

1. Reduce the cost and consumption of energy at all 255 DOE Schools.
2. Build a diverse portfolio of new, clean, on-site generation.
3. Aggressively implement energy efficiency and conservation measures including demand response.
4. Support the goals of the Hawaii Clean Energy Initiative and the DOE’s goal of 90 percent clean energy by 2040.
5. Leverage these transformational activities to create educational opportunities and stimulate the economy through local construction labor.

**Potential Impacts**

- Over $24,000,000 saved in operating expenses over five years.
- 100 megawatts of on-site renewable energy generation potential.
- 25 percent reduction in energy consumption over five years.
- 30 percent reduction in water consumption over five years.
- Creation of standardized and controlled classroom environmental conditions.
- Integration of project-based curriculum focused on STEM and sustainability in every school.
- Creation of student career pathways in the energy and sustainability field.
- Long-term economic development through direct and indirect local job creation.

In order to ensure *Ka Hei* positively impacts the community over the long-term, its true success will be rooted in making real, engaging connections between school upgrades and exciting learning opportunities for students and teachers.

This program will enhance the DOE’s and individual schools’ existing initiatives to create an interactive learning platform that brings the worlds of STEM (science, technology, engineering, and math) and sustainability to life. *Ka Hei* will leverage technology to bring real-world relevance to the learning experience that not only meets Common Core State Standards, but can be implemented alongside existing lesson plans.

Students and teachers will experience science lessons through on-campus Living Laboratories and curricula that are hands-on, island-based, and relevant for college and career preparedness. From opportunities to shadow engineers and subject matter experts in the field, to analyzing energy data from a live feed on site, students and teachers will have greater access to the tools and ideas needed to build a more diverse, sustainable energy future for Hawai‘i.