

## THE CURRENT

### Hawaii State Energy Office Clean Energy Update

Fall 2017

**THE CURRENT** serves Hawaii's businesses and policy makers in making informed decisions about clean energy investments and policy. Hawaii's clean energy sector is a significant driver for economic development to replace fossil fuel expenditures with home-grown industries that stimulates smart economic growth for future generations of Hawaii.

### PROGRESS TOWARD HAWAII'S CLEAN ENERGY GOALS

*Carilyn O. Shon, Energy Program Administrator*

Although summer officially ended in September, the persistence of warm, muggy weather into the autumn months serves as a reminder that upgrading our building codes and improving energy efficiency deserves year-round attention. The fall issue of *The Current* builds on this theme with two feature stories that address accomplishments achieved under the Hawaii Clean Energy Initiative (HCEI).

The first story highlights the successful completion of a two-part charrette that explored ways to further leverage the use of energy efficiency to help Hawaii reach its clean energy goals. The event, hosted by the Hawaii State Energy Office as part of its outreach efforts under HCEI, drew more than 100 stakeholders involved in energy issues in Hawaii. The intensive meetings gave participants a chance to identify priorities and address possible courses of action.

In this issue of *The Current* we also take a look at HCEI as an institution, and reflect on the impact it has had on Hawaii's energy system as the landmark agreement approaches its 10th year of existence. Although there had been previous plans floated to reduce Hawaii's dependence on petroleum, the first serious effort didn't gain traction until the creation of HCEI, which grew out of a 2008 Memorandum of Understanding between the U.S. Department of Energy and the State of Hawaii. While HCEI has served us well so far, it's critical that it continue to evolve as Hawaii moves toward its clean energy goals.

### FEATURED STAFF: ENERGY AND EMERGENCY MANAGEMENT

*Mark Want, Energy Systems & Planning Branch*

Hawaii's energy ecosystem includes hundreds of electricity, oil, gas, and renewable energy assets that are connected by systems and networks which are vulnerable to numerous natural and man-made threats and hazards. HSEO's Energy Assurance Program develops state expertise on energy infrastructure, response mechanisms, actionable plans, and key stakeholders' capabilities before an incident to lessen the health, safety, and economic impacts of any energy disruption. Staff member Mark Want works with others on the HSEO team in support of the state's response. "In an emergency, it's critical that we have and follow processes for effective communications within the energy and emergency management communities, and with policy makers and the public," Mark says. The HSEO team recognizes that protecting and improving the resiliency of the ecosystem is an ongoing effort that requires continued vigilance and personal preparedness, close coordination and outreach, contingency planning, and training and exercises. "Every day I enjoy the work HSEO does to build measures and effectiveness as we seek to assess the energy sector's security needs, develop programs, and find long-term solutions to meet DBEDT's mission," he says.

### CLEAN ENERGY VISION

The Hawaii State Energy Office's (HSEO) mission is to maximize Hawaii's energy self-sufficiency and security by developing and utilizing local energy resources in a balanced way.

In doing so, HSEO will guide our state toward the Hawaii Clean Energy Initiative goals to achieve 100 percent renewable energy in the electricity sector by 2045, reduce electricity consumption by 4,300 gigawatt-hours by 2030, and reduce petroleum use in transportation. To this end, HSEO works toward the deployment of clean energy infrastructure and serves as a catalyst for energy innovation and test bed investments. By achieving these goals, HSEO will grow the clean energy sector and transform Hawaii's economy.

### LEADING THE CHARGE

#### *Recognition For Investment in Energy Efficiency*

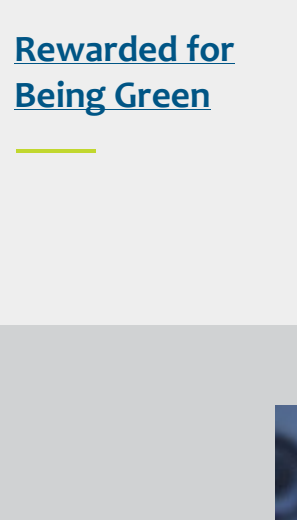
A national network of energy efficiency experts recently honored Hawaii with its "Race to the Top Award" for the pioneering work being done by state and county agencies to boost investment in energy efficiency projects that are helping the state meet its clean energy goals. The Energy Services Coalition for the sixth consecutive year recognized Hawaii as the nation's per capita leader in energy performance contracting, a form of innovative financing for capital improvements that allows government agencies to pay for energy efficiency upgrades with the savings on their utility bills.

#### *Award for Building Energy Code Advancements*

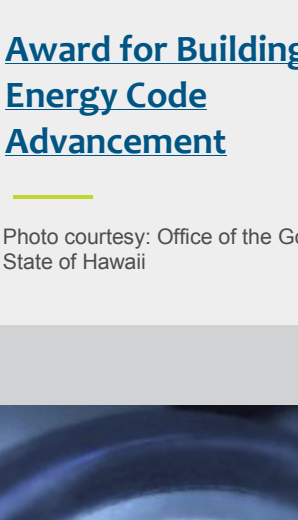
The Hawaii Energy Policy Forum presented their Energy Conservation and Efficiency Transformational Achievement Award to the State Building Code Council for its achievement in updating and advancing Hawaii's Building Energy Code. HSEO analyst and chair of the council's investigative committee on energy Howard Wiig and Hawaii Energy's Ramsey Brown accepted the award on behalf of the council.

#### *Hawaii is Recognized as Leader in Climate Report*

Hawaii is among 14 states and Puerto Rico who are members of the U.S. Climate Alliance. In September, the alliance released its 2017 Annual Report - Alliance States Take the Lead which mentions Hawaii as the first state in the nation to commit to 100 percent renewable energy in the electricity sector by 2045.

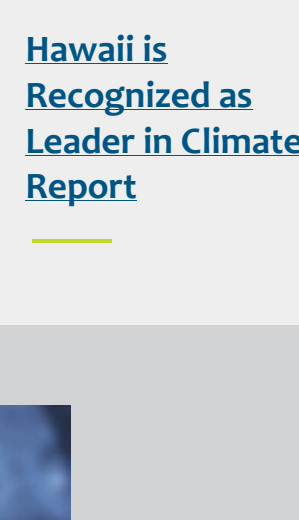


**Rewarded for Being Green**

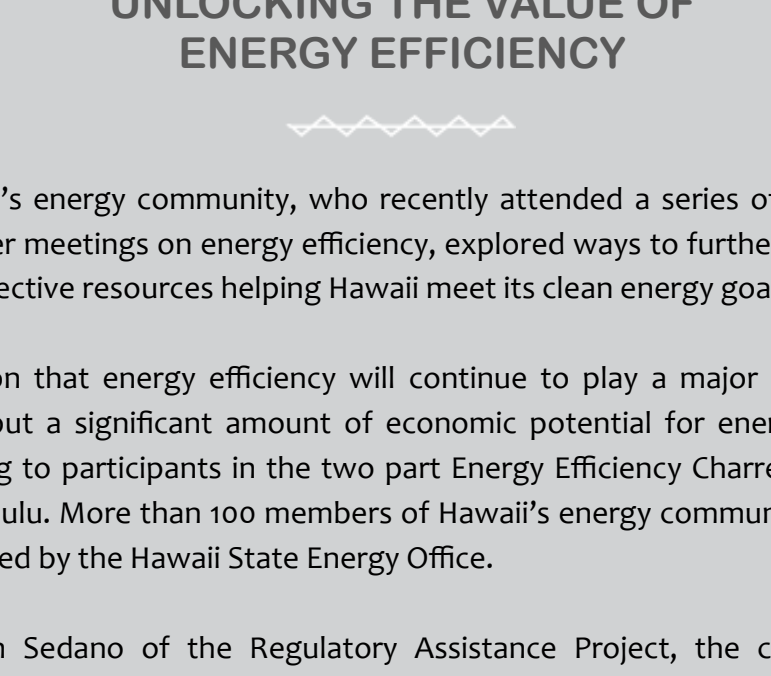


**Award for Building Energy Code Advancement**

Photo courtesy: Office of the Governor, State of Hawaii



**Hawaii is Recognized as Leader in Climate Report**



### UNLOCKING THE VALUE OF ENERGY EFFICIENCY

Members of Hawaii's energy community, who recently attended a series of Hawaii Clean Energy Initiative stakeholder meetings on energy efficiency, explored ways to further leverage what is one of the most cost effective resources helping Hawaii meet its clean energy goals.

There is no question that energy efficiency will continue to play a major role in Hawaii's clean energy transition, but a significant amount of economic potential for energy efficiency remains untapped, according to participants in the two part Energy Efficiency Charrette held May 8-9 and Sept. 26-27 in Honolulu. More than 100 members of Hawaii's energy community participated in the two events sponsored by the Hawaii State Energy Office.

Moderated by Rich Sedano of the Regulatory Assistance Project, the charrette provided an opportunity for a wide range of Hawaii's energy stakeholders to brainstorm and share ideas about new approaches to unlocking the value of energy efficiency.

Participants set the stage for the charrette by first outlining what elements of Hawaii's energy efficiency campaign are working and can be used as the foundation for further progress. These successes include:

- Efforts to update building codes;
- Focusing on strategic customer programs that support long-term state goals and engage market participants;
- Prioritizing low-income access to energy efficiency;
- Continuing to collaborate and challenge respectfully to further understanding and progress; and
- Pursuing the goal of inclusiveness of stakeholders.

When asked where there is room for improvement, participants offered a number of suggestions, including stepping up efforts to promote innovation and entrepreneurial behavior to support energy efficiency installations. Recommendations also covered enabling scaled programs, such as integration of energy efficiency and renewable energy projects, integration of technology and data applications, combined heat and power, and district cooling using chilled sea water. Such projects could be encouraged with the development of market-based programs that allow for longer-term investments, according to participants.

Participants also commented that energy efficiency programs should be fully valued, especially for local value, and be deployed before generation whenever possible. In addition, inclusiveness needs to be improved with a greater emphasis on the customer's perspective, according to participants.

There was general agreement that energy efficiency efforts would benefit from clearer and shared policy goals with sufficient financial support to achieve them. Participants thought there should be clearer lines of responsibility among Hawaii Energy, Hawaiian Electric Co., and others with opportunities to coordinate.

The charrette provided an opportunity for Hawaii's energy community to meet representatives from the organization hired by the Hawaii Public Utilities Commission (PUC) to oversee Hawaii Energy, the entity that administers the ratepayer-funded energy efficiency program for Honolulu, Maui and Hawaii counties. California-based 2050 Partners Inc., together with its subcontractors, will provide a range of support services to the PUC, including oversight of Hawaii Energy. Ted Pope, 2050 Partners principal, told the group that one of his team's priorities will be to do a comprehensive review of all installations of energy efficiency devices in order to update Hawaii's energy efficiency portfolio standard (EEPS). Pope said he and his team also will participate in a new round of meetings of the EEPS Technical Working Group, a panel organized by the PUC to advise the Commission on strategies to improve energy efficiency efforts.

[Learn more about the HCEI Energy Efficiency Charrette.](#)



### Hawai'i Powered Hawai'i Clean Energy Initiative

### 10-YEAR ANNIVERSARY COMMEMORATES UNPRECEDENTED PARTNERSHIPS

In late January 2008 a group of state and federal officials gathered in the Governor's Ceremonial Room at the State Capitol to sign a historic memorandum of understanding (MOU) they hoped would lay the groundwork for a transition to a clean energy future for Hawaii. At roughly the same time executives from Walmart assembled on the rooftop of the company's Keamouku Street Store across town to unveil one of Hawaii's first commercial-scale solar photovoltaic systems, declaring it "good for business and the environment."

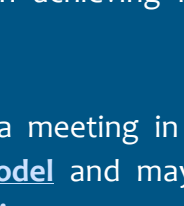
While the two events were not coordinated, they provided an auspicious start for the Hawaii Clean Energy Initiative (HCEI), which was launched that day with the signing of the MOU by the governor and a top official from the U.S. Department of Energy (USDOE). The agreement would prove to be the guiding star in Hawaii's fight to end the state's dependence on fossil fuels and transition to an energy system fueled by renewable sources such as wind, solar, geothermal and ocean power. As HCEI nears its 10th anniversary it is timely to reflect on its accomplishments and take a look at what lies ahead.

HCEI has a long list of metrics to illustrate its successes to date, including a renewable portfolio standard in excess of 25 percent. But there is general agreement in Hawaii's energy community that none of it would be possible without the underlying support of an unprecedented partnership of energy stakeholders. With the backing of the USDOE, state and local government leaders, the private sector, and non-profits, HCEI has been able to keep the clean energy movement forging ahead in Hawaii. This broad based commitment was further cemented when the USDOE and Hawaii reaffirmed their support for HCEI with the signing of a second MOU in 2014. The new MOU allowed policymakers to take a fresh look at parts of HCEI that needed to be strengthened, such as reducing petroleum use in the transportation sector, which accounts for just over 60 percent of Hawaii's petroleum consumption.

One of the ingredients of HCEI's success is the information and technical assistance that has been provided by the USDOE and its network of national laboratories. Their expertise in areas such as grid modernization and data visualization for complex energy modeling will be particularly helpful to the Hawaii State Energy Office and other energy stakeholders in Hawaii as the state gets closer to reaching its goal of 100 percent renewable energy in the electricity sector. There is widespread recognition that reaching the 100 percent threshold will be a challenging endeavor, so stakeholders will need every resource available.

While HCEI's positive impact on Hawaii's clean energy transformation is well-documented, the benefits extend well beyond the shores of the island state. Thanks to HCEI, Hawaii has been able to demonstrate that reliable, affordable, and clean energy technologies can work at scale. Hawaii's success can serve as an integrated model and demonstration test bed for the United States and other island communities around the world.

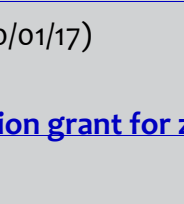
Visit the [Hawaii Clean Energy Initiative](#) site for updates and notices on the 10-year anniversary.



### DID YOU KNOW?

In October HSEO hosted a series of community meetings across the state to solicit community input for a study on future models for utility ownership and regulation in Hawaii. HSEO is undertaking the study at the request of the Hawaii State Legislature to evaluate the costs and benefits of various electric utility ownership models, as well as the viability of various utility regulatory approaches to help Hawaii in achieving its energy goals. The study will examine scenarios for each of Hawaii's counties.

For those who were unable to attend a meeting in person can view a copy of the material presented at [energy.hawaii.gov/utility-model](http://energy.hawaii.gov/utility-model) and may participate by submitting feedback via email to [dbedt.utilitybizmodstudy@hawaii.gov](mailto:dbedt.utilitybizmodstudy@hawaii.gov).



### ENLIGHTENING NEWS & UPDATES

[Hawaii expands rooftop solar, storage options for residential customers](#)  
(Utility Dive, 10/24/17)

[Energy Performance Contract Fuels Efficiency Improvements at Hawaii Airports](#)  
(Aviation Pros, 10/10/17)

[Hawaii's energy industry can learn from Puerto Rico's hurricane recovery](#)  
(Honolulu Star-Advertiser, 10/01/17)

[Honolulu receives \\$1.45 Million grant for zero emission buses](#)  
(KITV, 9/18/17)

[Ige touts Hawaii's sustainability goals at New York summit](#)  
(Hawaii News Now, 9/16/17)

[How States Will Hit 100 Percent Clean Energy](#)  
(Scientific American, 9/05/17)

[HECO submits final plan for its grid](#)  
(Honolulu Star-Advertiser, 8/30/17)

[Hawaii's first public hydrogen fuel station is being developed](#)  
(Hydrogen Fuel News, 8/07/17)