

## THE CURRENT

Hawaii State Energy Office  
Clean Energy Update

Winter 2018

**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.

### CELEBRATING PARTNERSHIPS AND COLLABORATION

*Carilyn O. Shon, Energy Program Administrator*

As we continue to build on the success of the Hawaii Clean Energy Initiative (HCEI) 10 years after its launch it has become clear that a critical part of the effort will be modeling our energy ecosystem to ensure that we are pursuing the most cost effective strategies. That will require a holistic approach to planning that takes into consideration, among other things, the growing synergy between the electricity and transportation sectors. Addressing transportation in the context of HCEI will be key because it accounts for nearly two-thirds of Hawaii's petroleum use.

In the first featured story in this issue of The Current we report on a commemoration held at Washington Place last month recognizing the 10th anniversary of HCEI. Representatives from the state and federal agencies that signed the 2008 Memorandum of Understanding launching HCEI addressed a group of about 70 energy stakeholders gathered at Washington Place for the event. The speakers spoke about the successes of HCEI and areas where the initiative can be strengthened over the next 10 years, including a greater emphasis on decarbonizing transportation.

Our second featured story focuses on a new coalition formed to help advance the electrification of transportation in Hawaii. Drive Electric Hawaii (DEH) is comprised of the Hawaii State Energy Office and seven other public, private, and nonprofit organizations. A top priority of DEH is to support and promote electric vehicles as a way to reduce petroleum use in transportation. The story highlights information and resources available on the DEH website and what the group hopes to achieve through educating consumers about the benefits of electric vehicles.

### FEATURED STAFF: ONLINE TOOLS FOR RENEWABLE ENERGY DEVELOPMENT

*Cameron Black, Renewable Energy Branch*

Hawaii's isolated island ecosystems and communities are particularly vulnerable to a changing climate and an unpredictable global economy. Displacement of imported fossil fuels by locally generated renewable energy resources is one way Hawaii can help protect itself from harmful and uncontrollable external influences. Fortunately, Hawaii is blessed with a diverse portfolio of indigenous energy resources and the collective will to harness them appropriately.

The Renewable Energy Branch of the Hawaii State Energy Office supports this effort in part by providing resources, analysis, and information to stakeholders involved in renewable energy developments. Staff member Cameron Black has supported the creation of numerous tools to facilitate the appropriate siting and permitting of renewable energy projects in Hawaii, which can be found at the Hawaii State Energy Office's **Developer & Investor Center** website. "While it's called the Developer & Investor Center, our goal is to offer resources that benefit a wide range of stakeholders – such as developers, investors, regulators, landowners, communities, lawmakers, organizations, and individual citizens – so that informed decisions can be made early in the project planning stage, which should minimize project impacts and reduce project costs typically passed onto Hawaii ratepayers," Cameron 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

#### *HAVEN Presented to National Energy Officials*

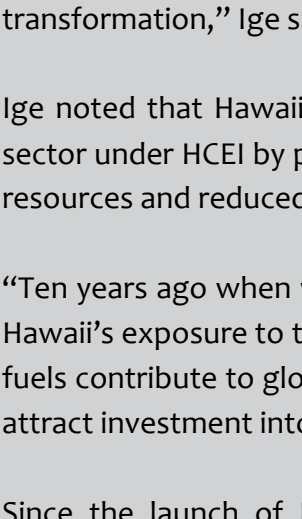
HSEO's Energy Systems and Planning Program Manager, Chris Yunker, gave a presentation on the Hawaii Advanced Visualization Environment Nexus (HAVEN) tool at the 2018 National Association of State Energy Officials' Energy Policy Outlook Conference. HAVEN will create a platform to help stakeholders analyze and make informed decisions regarding Hawaii's clean energy transformation. The HAVEN project is funded through a U.S. Department of Energy competitive grant and is a partnership between HSEO, the University of Hawaii at Manoa's Laboratory for Advanced Visualization & Applications, and the Hawaiian Electric Companies.

#### *Legislative Measures*

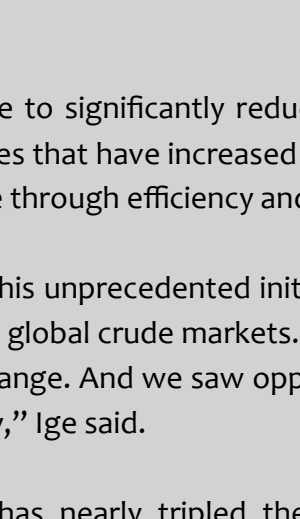
Energy-related legislation can be tracked at the Hawaii Clean Energy Initiative site. Get up to date, real-time information of 2018 legislative measures such as climate change, energy planning, transportation, and more.

#### *Maui Energy Conference*

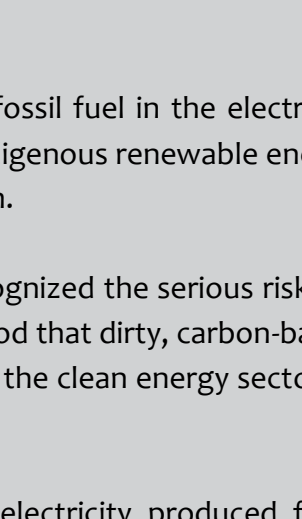
Join DBEDT Director Luis Salaveria and HSEO Energy Program Administrator Carilyn Shon at the Maui Energy Conference, March 14-15. Luis will moderate a panel on the business opportunities created by the Hawaii Clean Energy Initiative and Carilyn will discuss energy efficiency in reducing carbon.



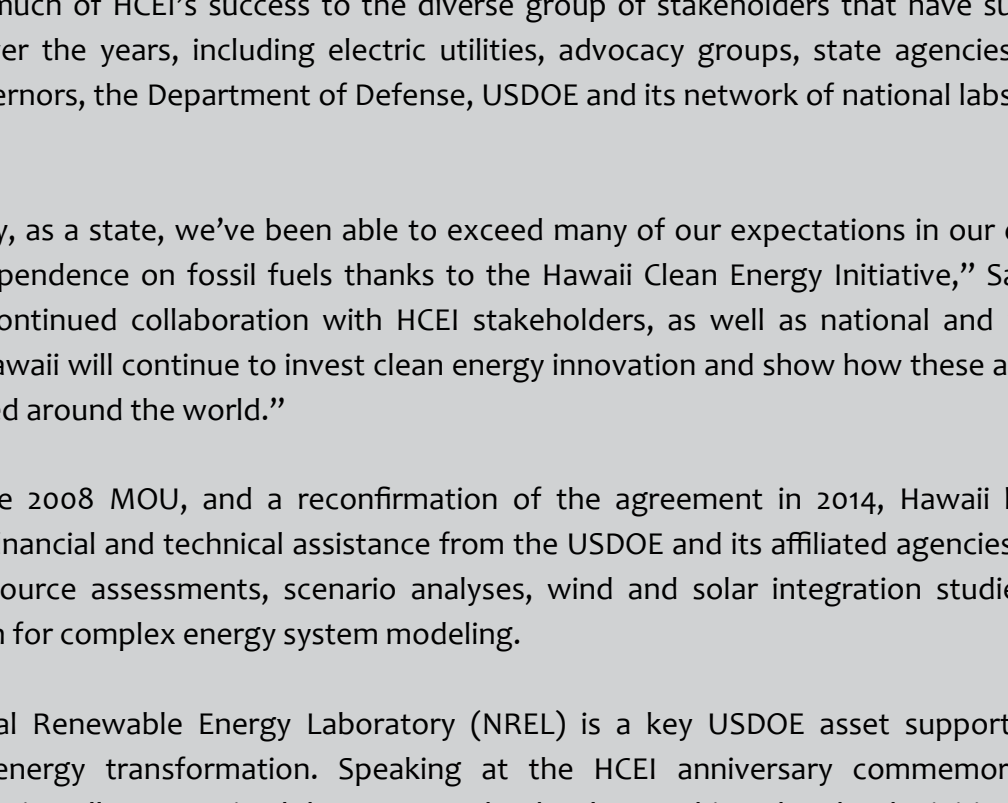
**HAVEN Presented to National Energy Officials**



**2018 Legislative Measures**



**Maui Energy Conference**



### HAWAII CLEAN ENERGY INITIATIVE: 2008-2018

In the 10 years since its launch the Hawaii Clean Energy Initiative (HCEI) has grown from a lofty idea to a powerful force that is reducing Hawaii's dependence on fossil fuels.

Representatives from the state and federal agencies that signed the 2008 memorandum of understanding creating HCEI – along with members of Hawaii's energy community – gathered in Honolulu recently to recognize the accomplishments achieved under HCEI and consider the challenges that lie ahead.

"The Hawaii Clean Energy Initiative has served Hawaii well over the past 10 years," Gov. David Ige told a group of about 70 people at an event to commemorate the 10-year anniversary of the landmark program. "It has been universally embraced, and maintaining this broad-based support will be critical over the next decade as we face even greater challenges to our clean energy transformation," Ige said.

Ige noted that Hawaii has been able to significantly reduce its use of fossil fuel in the electricity sector under HCEI by pursuing policies that have increased the use of indigenous renewable energy resources and reduced energy waste through efficiency and conservation.

"Ten years ago when we launched this unprecedented initiative we recognized the serious risks of Hawaii's exposure to the volatility of global crude markets. We understood that dirty, carbon-based fuels contribute to global climate change. And we saw opportunities for the clean energy sector to attract investment into our economy," Ige said.

Since the launch of HCEI, Hawaii has nearly tripled the amount of electricity produced from renewable resources, reduced the amount of petroleum consumed for power generation by 23 percent, and avoided more than 750,000 metric tons of carbon emissions. HCEI has also helped spur job growth in the clean energy sector. The 6,687 plug-in EVs registered in Hawaii as of December 2017 represented a 30 percent increase from the same month a year earlier. Meanwhile, registration of gasoline-powered passenger vehicles rose 1.2 percent over the same period.

Luis Salaveria, director of the Hawaii Department of Business, Economic Development, and Tourism attributed much of HCEI's success to the diverse group of stakeholders that have supported the initiative over the years, including electric utilities, advocacy groups, state agencies, legislators, former governors, the Department of Defense, USDOE and its network of national labs, and energy consumers.

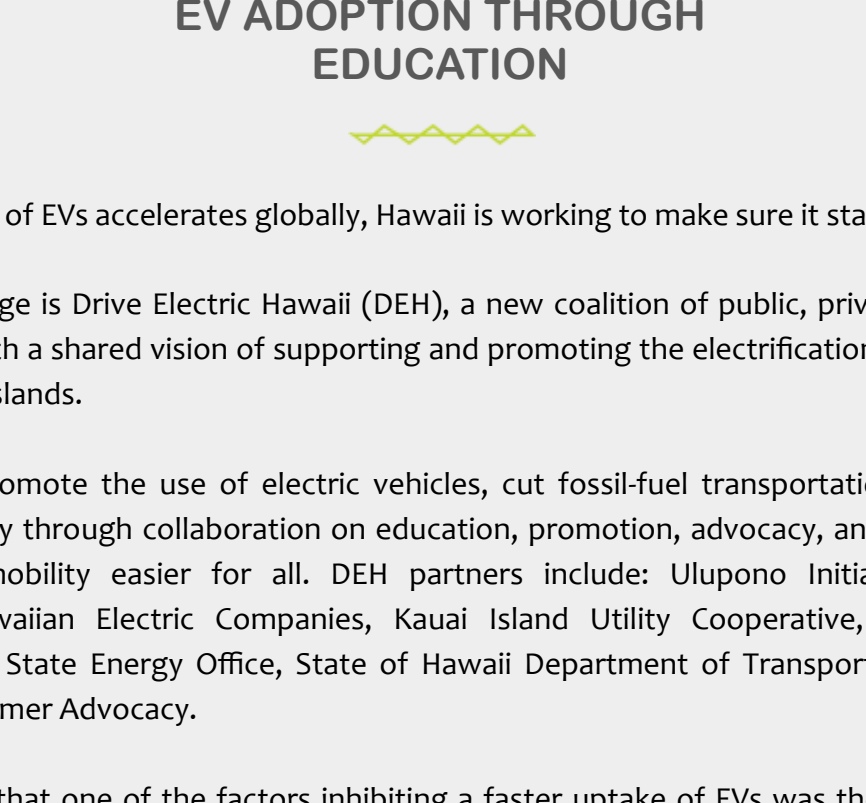
"Collectively, as a state, we've been able to exceed many of our expectations in our quest to end Hawaii's dependence on fossil fuels thanks to the Hawaii Clean Energy Initiative," Salaveria said. "Through continued collaboration with HCEI stakeholders, as well as national and international partners, Hawaii will continue to invest clean energy innovation and show how these achievements can be scaled around the world."

Through the 2008 MOU, and a reconfirmation of the agreement in 2014, Hawaii has received invaluable financial and technical assistance from the USDOE and its affiliated agencies for projects such as resource assessment, scenario analyses, wind and solar integration studies, and data visualization for complex energy system modeling.

The National Renewable Energy Laboratory (NREL) is a key USDOE asset supporting Hawaii's ambitious energy transformation. Speaking at the HCEI anniversary commemoration, NREL Director Martin Keller recognized the progress that has been achieved under the initiative.

"Since its launch, HCEI has played a pivotal role in Hawaii's progress toward 100 percent renewable electricity," Keller said.

Visit the special HCEI 10th anniversary page at [hawaiicleanenergyinitiative.org/10th-anniversary](http://hawaiicleanenergyinitiative.org/10th-anniversary).



### EV ADOPTION THROUGH EDUCATION

As the popularity of EVs accelerates globally, Hawaii is working to make sure it stays out front.

Leading the charge is Drive Electric Hawaii (DEH), a new coalition of public, private, and nonprofit organizations with a shared vision of supporting and promoting the electrification of transportation throughout the islands.

DEH seeks to promote the use of electric vehicles, cut fossil-fuel transportation, and add more renewable energy through collaboration on education, promotion, advocacy, and infrastructure to make electric mobility easier for all. DEH partners include: Ulupono Initiative, Blue Planet Foundation, Hawaiian Electric Companies, Kauai Island Utility Cooperative, Rocky Mountain Institute, Hawaii State Energy Office, State of Hawaii Department of Transportation, and Hawaii Division of Consumer Advocacy.

DEH recognized that one of the factors inhibiting a faster uptake of EVs was the need for greater consumer education. To that end, DEH's recently launched website, [driveelectricchi.com](http://driveelectricchi.com), serves as a resource hub to help Hawaii residents understand the driving, charging, and owning experience of switching to electric transportation.

The creation of DEH comes amid growing popularity of electric vehicles in Hawaii and elsewhere. While EVs still only make up a small fraction of all vehicles on the road in Hawaii, the growth rate for EVs is exponentially higher. The 6,687 plug-in EVs registered in Hawaii as of December 2017 represented a 30 percent increase from the same month a year earlier. Meanwhile, registration of gasoline-powered passenger vehicles rose 1.2 percent over the same period.

Several major automakers have announced plans in recent months to significantly expand production of EVs over the next five years to meet anticipated demand from consumers looking for ways to reduce their carbon footprint while cutting their transportation costs.

Volvo announced that all models it introduces starting in 2019 will be either hybrids or powered solely by batteries. Infiniti, the luxury brand of Japanese automaker Nissan, said in January that it will start phasing out gas-powered vehicles in 2021 and switch to all electrified models. For its part, Ford announced plans to spend \$11 billion to launch 40 new electric vehicles and hybrids by 2022. Ford said 16 of the new models will be all-electric vehicles, including an SUV due in 2020. These new EVs will join a host of others currently available from automakers including Audi, BMW, General Motors, Honda, Kia, Mercedes-Benz, Mitsubishi, Porsche, Tesla, and Volkswagen.

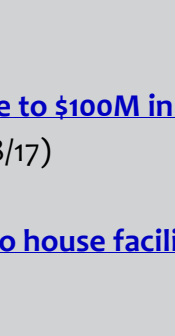
The DEH website, [driveelectricchi.com](http://driveelectricchi.com), provides information on which particular automakers offering EVs operate in Hawaii and on which islands. The website also includes, or provides links to, a host of information about EVs including things to consider before buying an EV, a cost comparison between operating an EV versus a gasoline-powered vehicle, incentive programs for EV owners, and locations of charging stations.

"Drive Electric Hawaii is able to help local drivers navigate the exciting world of electric vehicles as a viable, clean transportation alternative," said Greg Gaug, vice president of investments at Ulupono Initiative. "With so much information out there about types of cars, chargers, and laws, our coalition provides a coordinated effort to educate and advocate for more EVs on our roads. As an EV driver myself, I can attest that EVs are good, not only for my personal values, but also with helping our state reach our renewable energy and environmental goals."



### DID YOU KNOW?

HSEO will host a series of stakeholder workshops in late spring 2018 to discuss various types of regulatory models that are being analyzed for the utility ownership model study. The project team will seek input from residents on how they would like the state's utility regulations to drive utility actions to align with public priorities. Workshops will be held on each island and will be open to the public. Updates and announcements will be available at [energy.hawaii.gov/utility-model](http://energy.hawaii.gov/utility-model).



### ENLIGHTENING NEWS & UPDATES

**Solar farms large enough to power 32,000 homes coming to Oahu**  
(Hawaii News Now, 1/24/18)

**Utilities chair talks Hawaii's energy future**  
(Pacific Business News, 1/19/18)

**Hawaii regulators order expanded community renewables program**  
(PV Magazine, 1/03/18)

**Hawaii taxpayers claim close to \$100M in solar tax credits**  
(Pacific Business News, 12/28/17)

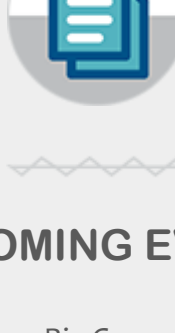
**PMRF and KIUC strike deal to house facility on westside**  
(The Garden Island, 12/22/17)

**Energy efficiency program trims incentives but increases savings**  
(Honolulu Star-Advertiser, 12/01/17)

**State Capitol to get seawater air conditioning**  
(Honolulu Star-Advertiser, 11/15/17)

**The First Fossil-Fuel Free Paradise**  
(Nation Swell, 11/14/17)

**GreenBiz reveals advisory board for Hawaii clean energy conference**  
(GreenBiz, 11/01/17)



### UPCOMING EVENTS

HSEO is once again partnering with the GreenBiz Group for VERGE Hawaii: Asia Pacific Clean Energy Summit, June 12-14, 2018, at the Hilton Hawaiian Village in Honolulu. VERGE Hawaii enables participants to create new partnerships and explore emerging technologies and trends that will increase economic and community resilience — in Hawaii and around the world. **Register today for VERGE Hawaii 2018!**