

THE CURRENT

Hawaii State Energy Office
Clean Energy Update

Summer 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 stimulate smart economic growth for future generations of Hawaii.

PURSuing CLEAN TRANSPORTATION

Carilyn O. Shon, Energy Program Administrator

With Hawaii firmly on track to meet its interim statutory targets for renewable energy and energy efficiency in the electricity sector, we can now focus greater attention on clean transportation. Working to decarbonize transportation makes sense since the sector is the nation's largest direct source of greenhouse gas emissions. The topic of clean transportation was featured prominently at the recent VERGE Hawaii conference, which we recapped in the first featured story in this issue of *The Current*. The conference attracted nearly 700 participants from around the world who shared insights that will help advance next-generation practices for sustainable energy solutions in Hawaii and beyond.

Our second feature story also focuses on clean transportation. The article provides an update on the Hawaii State Energy Office's (HSEO) work to develop a plan to allocate \$8.125 million over the next 10 years from a settlement with German automaker Volkswagen to promote the reduction of vehicle emissions in Hawaii. To inform its work HSEO solicited public input on a range of eligible mitigation actions via a questionnaire posted on its website. Decarbonizing transportation will remain a priority for years to come, and HSEO is committed to building broader stakeholder alliances and addressing the difficult choices that will have to be made.

FEATURED STAFF: BUSINESSES DEDICATED TO A SUSTAINABLE HAWAII

Gail Suzuki-Jones, Energy Efficiency Branch

Efforts by Hawaii's visitor industry and other businesses to conserve energy and implement sustainable practices are having a positive impact on both the environment and Hawaii's clean energy transformation. Participation by the visitor industry is key since tourism is Hawaii's biggest economic driver, generating \$16.8 billion in spending last year. The visitor industry's involvement is due in large part to the support and guidance provided by the Hawaii Green Business Program (HGBP), a partnership of HSEO, Department of Health, Chamber of Commerce, and Honolulu Board of Water Supply.

HSEO participates in the program through its Energy Efficiency Branch (EEB). EEB staff member Gail Suzuki-Jones and a group of hardworking and resourceful interns help businesses meet HGBP benchmarks by creating effective checklists, providing technical assistance, conducting site visits, and promoting achievements of all green business awardees. "We commend the hard work of the businesses and organizations that participate in the Hawaii Green Business Program," Gail says. "They are demonstrating that they can improve their bottom lines while contributing to a more sustainable Hawaii."

With the other dedicated partners, the HGBP has been able to develop and recruit, assist, and recognize more than 100 businesses, resulting in significant energy and water savings. It is estimated that HGBP participants have saved more than 200 million gallons of water and \$6 million in electricity costs over the past 10 years. For more information on the Hawaii Green Business Program, visit greenbusiness.hawaii.gov.

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

Hawaii's Strategic Energy Plan

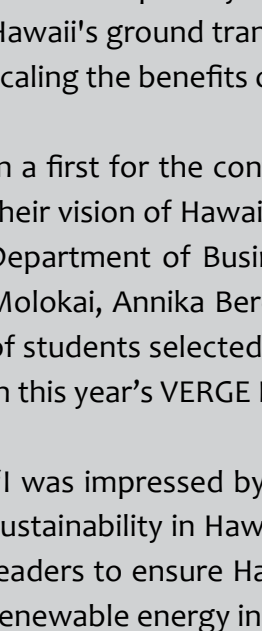
HSEO is pleased to share its new brochure, *State of Hawaii Strategic Energy Plan*. This informational piece gives an overview of the state's four strategic goals: promoting energy efficiency, diversifying our energy portfolio, establishing a 21st century grid, and accelerating clean transportation. You'll also find information on clean energy accomplishments and activities.

Community Meetings on Utility Model Study

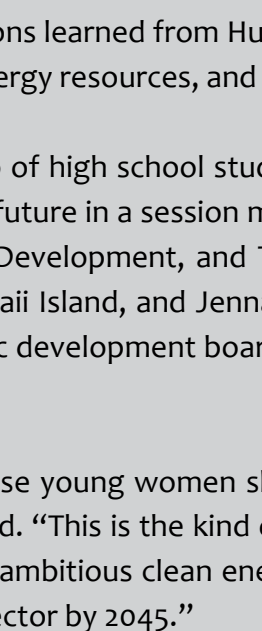
HSEO is conducting a study on alternative electric utility and regulatory models in Hawaii. As part of this study, community meetings were held for stakeholders' input on the future of electric utility regulatory models in achieving state energy goals. The statewide meetings, held in June, focused on the future of electric utility regulatory models, including performance-based regulation and the role the Public Utilities Commission plays in achieving state energy goals.

Transcending Oil: Hawaii's Path to a Clean Energy Economy

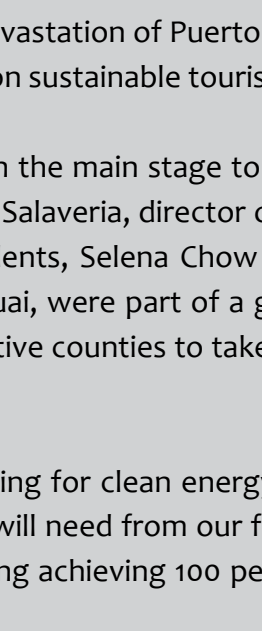
Elemental Excelsior commissioned an independent analysis of what it would take to reach Hawaii's clean energy goals of 2045. The analysis provides a quantitative independent assessment of the pace and impact of clean energy deployment in Hawaii since the launch of the Hawaii Clean Energy Initiative in 2008 and explores potential pathways in the decades to come. The report, *Transcending Oil: Hawaii's Path to a Clean Energy Economy*, finds the faster we transcend oil the more money we save, the more jobs we create, and the greater our opportunity in mobility can become.



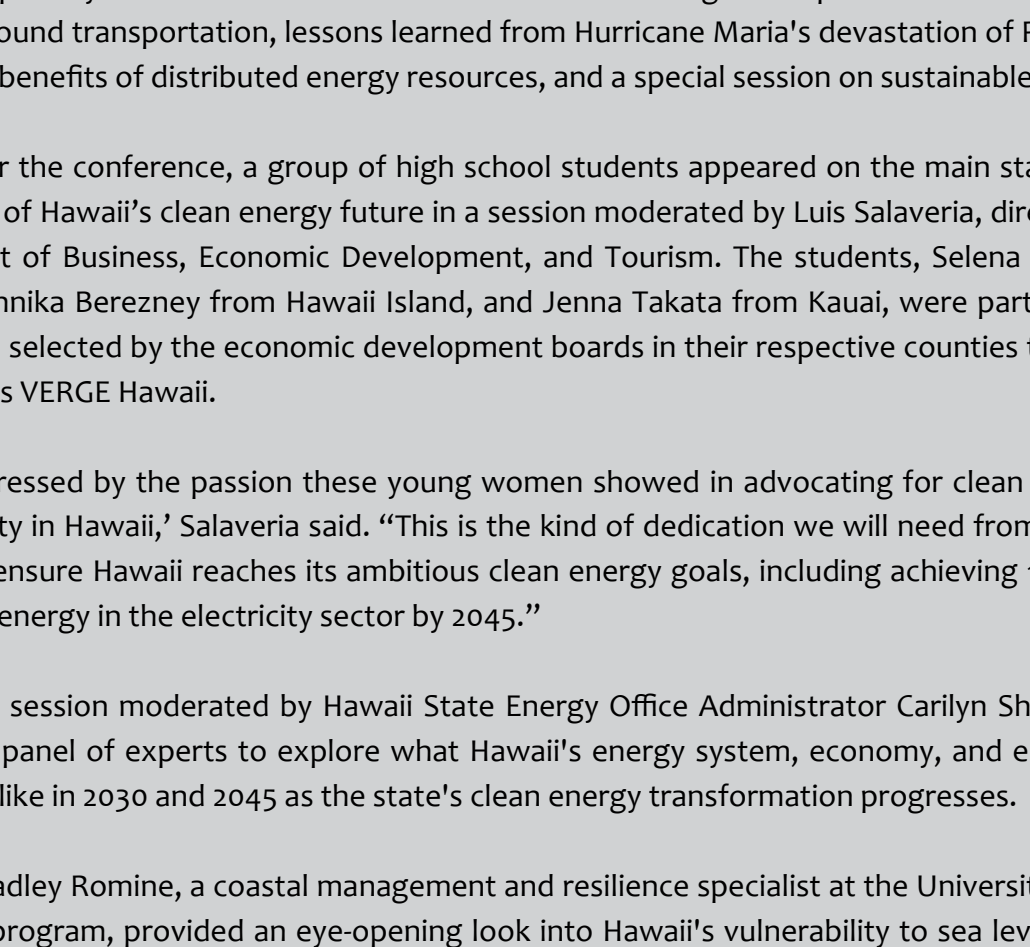
[Hawaii's Strategic Energy Plan](#)



[Community Meetings on Utility Model Study](#)



[Transcending Oil: Hawaii's Path to a Clean Energy Economy](#)



YOUTH SHARE THEIR VISION OF HAWAII'S CLEAN ENERGY FUTURE

Nearly 700 participants filled the Hilton Hawaiian Village's conference center for the 3rd annual VERGE Hawaii: Asia Pacific Clean Energy Summit, held June 12-14. This year's program highlighted Hawaii's role as an energy innovation leader and international test bed and included stakeholders from high school students to corporate CEOs.

Dozens of plenary and breakout sessions covered a wide range of topics such as decarbonizing Hawaii's ground transportation, lessons learned from Hurricane Maria's devastation of Puerto Rico, scaling the benefits of distributed energy resources, and a special session on sustainable tourism.

In a first for the conference, a group of high school students appeared on the main stage to offer their vision of Hawaii's clean energy future in a session moderated by Luis Salaveria, director of the Department of Business, Economic Development, and Tourism. The students, Selena Chow from Molokai, Annika Berezney from Hawaii Island, and Jenna Takata from Kauai, were part of a group of students selected by the economic development boards in their respective counties to take part in this year's VERGE Hawaii.

"I was impressed by the passion these young women showed in advocating for clean energy and sustainability in Hawaii," Salaveria said. "This is the kind of dedication we will need from our future leaders to ensure Hawaii reaches its ambitious clean energy goals, including achieving 100 percent renewable energy in the electricity sector by 2045."

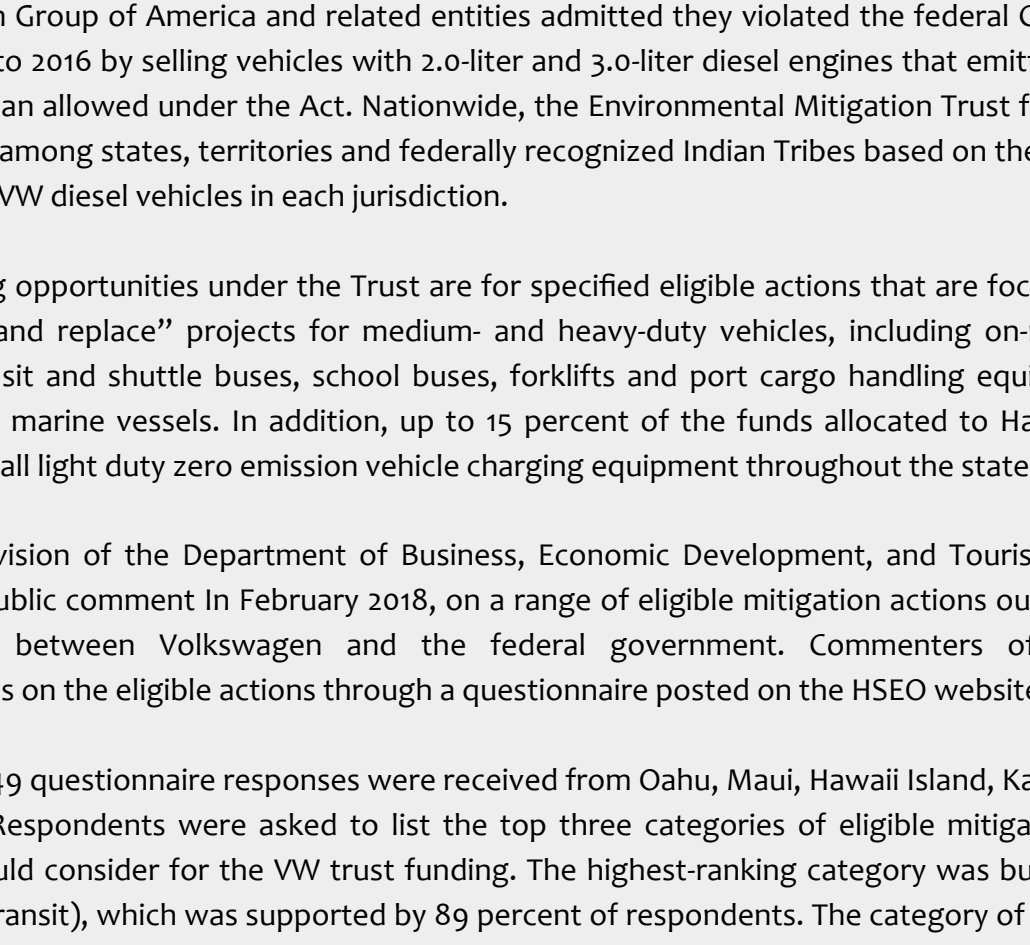
A breakout session moderated by Hawaii State Energy Office Administrator Carilyn Shon brought together a panel of experts to explore what Hawaii's energy system, economy, and environment might look like in 2030 and 2045 as the state's clean energy transformation progresses.

Panelist Bradley Romine, a coastal management and resilience specialist at the University of Hawaii Sea Grant program, provided an eye-opening look into Hawaii's vulnerability to sea level rise from climate change. Romine, citing National Oceanic and Atmospheric Administration data, said the sea level in Hawaii could rise as much as 1.1 feet by 2030 and up to 3.2 feet by 2060. With a 3.2-foot rise most of Waikiki would be under water and Hawaii would suffer an estimated \$19 billion in loss of land and structures, Romine said.

Shasha Fesharaki, executive vice chairman of Facts Global Energy, made the case that Hawaii's economy and consumers would benefit from accelerating the push to end Hawaii's dependence on oil.

"Over the past four years Hawaii spent a low of \$3 billion in 2016 to more than \$5 billion in 2014 on foreign oil imports. All those dollars we are spending on imported oil are basically flowing out of the state. So, anything we can do to alleviate that dependence will flow back into the local economy and help the average citizen," Fesharaki told the audience.

Eugene Tian, the State of Hawaii's chief economist, said Hawaii's demographic profile is expected to shift over the next 25 years, with the population growing at a slower pace and becoming more aged. Energy efficiency is forecast to continue improving with total energy consumption decreasing slightly, Tian added in his presentation.



EVALUATING OPPORTUNITIES FOR THE VW SETTLEMENT

HSEO is drafting a plan to allocate the \$8.125 million Hawaii will receive in the Volkswagen Environmental Mitigation Trust per the Volkswagen settlement to promote the reduction of vehicle emissions in Hawaii.

The Volkswagen Environmental Mitigation Trust is part of a larger Volkswagen settlement which provides funding to mitigate the environmental damage caused by VW's use of illegal devices to hide the excess pollution in certain diesel-powered vehicles during federal emissions tests. Volkswagen Group of America and related entities admitted they violated the federal Clean Air Act from 2009 to 2016 by selling vehicles with 2.0-liter and 3.0-liter diesel engines that emitted more air pollution than allowed under the Act. Nationwide, the Environmental Mitigation Trust fund is being distributed among states, territories and federally recognized Indian Tribes based on the proportion of affected VW diesel vehicles in each jurisdiction.

The funding opportunities under the Trust are for specified eligible actions that are focused mostly on "scrap and replace" projects for medium- and heavy-duty vehicles, including on-road freight trucks, transit and shuttle buses, school buses, and port cargo handling equipment, and commercial marine vessels. In addition, up to 15 percent of the funds allocated to Hawaii can be used to install light duty zero emission vehicle charging equipment throughout the state.

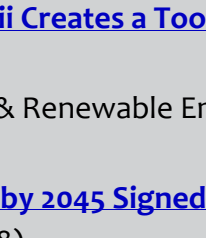
HSEO, a division of the Department of Business, Economic Development, and Tourism (DBEDT), gathered public comment in February 2018, on a range of eligible mitigation actions outlined in the settlement between Volkswagen and the federal government. Commenters offered their perspectives on the eligible actions through a questionnaire posted on the HSEO website.

A total of 149 questionnaire responses were received from Oahu, Maui, Hawaii Island, Kauai, and the mainland. Respondents were asked to list the top three categories of eligible mitigation actions Hawaii should consider for the VW trust funding. The highest-ranking category was buses (school, shuttle or transit), which was supported by 89 percent of respondents. The category of local freight trucks and port drayage trucks was supported by 66 percent of respondents, and the category of light duty zero emissions vehicle charging equipment was supported by 57 percent of respondents.

Gov. David Ige has designated DBEDT as the lead agency for the purposes of administering Hawaii's trust allocation. HSEO is the primary agency charged with expending the trust funds and executing the environmental mitigation projects funded by the trust. The settlement calls for expending the funds within 10 years. HSEO has demonstrated experience, expertise, and leadership in implementing clean transportation across Hawaii, including zero emission vehicles and charging infrastructure that are contributing to reduced petroleum consumption and emissions in the transportation sector.

In addition to its contributions to the Trust, VW will pay billions of dollars in civil penalties and customer buyback and modification programs. Volkswagen also must invest \$2 billion over the next 10 years in zero emissions vehicle infrastructure and education projects across the United States through its Electrify America subsidiary, possibly including Hawaii.

More information on Hawaii's involvement in the Volkswagen Settlement can be found at energy.hawaii.gov/vw.



ENLIGHTENING NEWS & UPDATES

[Honolulu airport is about to get thousands of new solar panels](#)

(CNBC, 7/25/18)

[Polynesian Cultural Center takes advantage of new on-bill financing program](#)

(Pacific Business News, 7/09/18)

[Hawaii far from 100% renewables — but running ahead of schedule, state finds](#)

(Utility Dive, 7/05/18)

[Hawaii counties join Drive Electric Hawaii to promote use of electric vehicles](#)

(Pacific Business News, 6/13/18)

[EERE Success Story—Hawaii Creates a Tool to Better Identify Renewable Energy Siting Potential](#)

(Office of Energy Efficiency & Renewable Energy, 6/05/18)

[Carbon Net Neutrality Goal by 2045 Signed Into Law](#)

(Hawaii Public Radio, 6/04/18)

[Commercial center pegged for NELHA](#)

(Hawaii Tribune Herald, 5/13/18)

[Large-Scale Solar Project on 11 Acres in S Maui](#)

(Maui Now, 5/07/18)



UPCOMING EVENTS

HSEO is a proud partner of the 18th Annual Hawaii Build + Buy Green Conference, September 21-22, 2018 at the Courtyard King Kamehameha's Kona Beach Hotel in Kailua-Kona, Hawaii.

This annual event brings together nationally acclaimed speakers and local experts in the fields of high performance building design, water conservation and wastewater innovation, and net zero energy.

[Register today for Build + Buy Green 2018!](#)