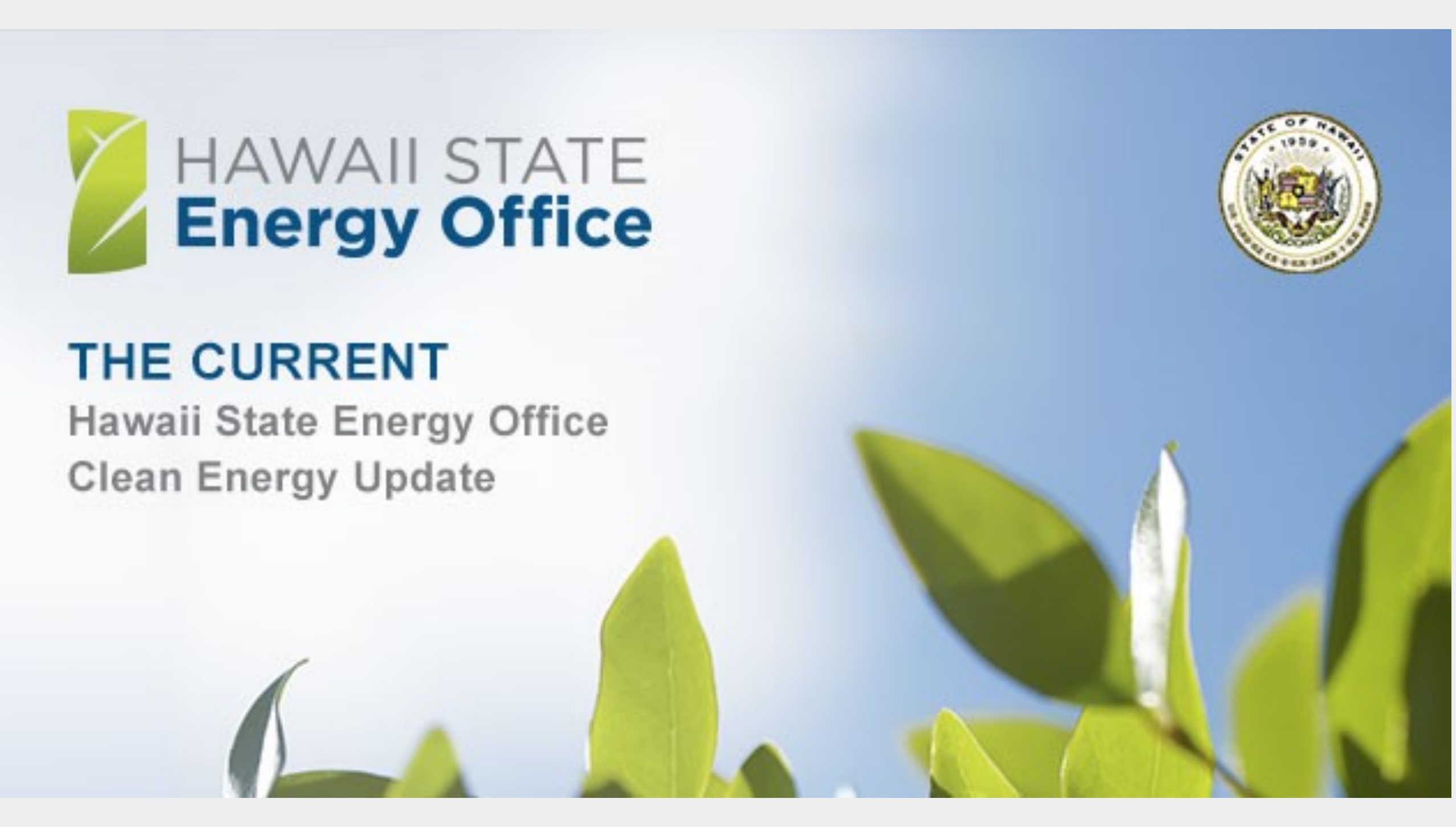


THE CURRENT

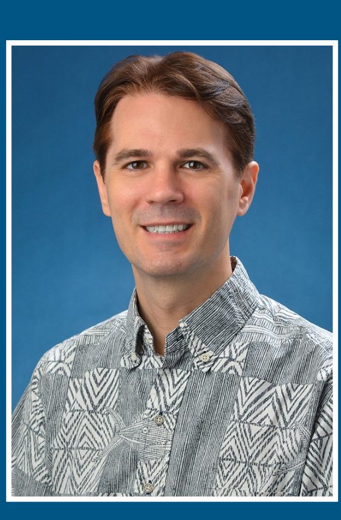
Hawaii State Energy Office
Clean Energy Update

Winter 2020

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.

TACKLING CLEAN ENERGY ON ALL FRONTS

Scott J. Glenn, Chief Energy Officer



Electric vehicles make sense for Hawaii for a lot of reasons. They're good for the environment, good for the economy and good for our communities. As Hawaii endeavors to reduce its dependence on fossil fuels the electrification of ground transportation offers an option to immediately address a significant contributor of greenhouse gas emissions. And consumers will be pleased to know that as EVs become mainstream and more models enter the marketplace, vehicle prices are increasingly becoming comparable to traditional gasoline-powered cars.

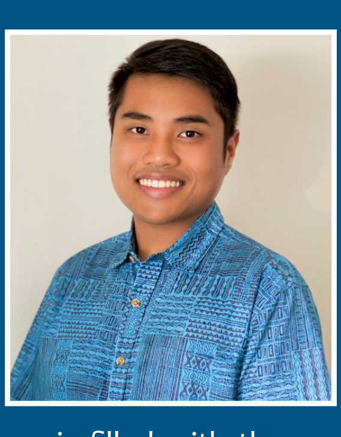
There are other advantages of EV ownership, including the fact that the cost of maintaining an EV is significantly lower than its internal combustion engine counterpart. So, it shouldn't be surprising that Hawaii has one of the highest rates of EV ownership per capita in the country. According to the latest motor vehicle registration data from the counties there were 11,081 EVs registered statewide in Hawaii in January 2020. There were some hiccups in the reporting of EV data late last year due to the use of a data filter that resulted in an undercounting of EVs from October through December. That has been corrected with the January tally.

Our first feature story in this edition of *The Current* builds on the EV theme, providing an update on how the Hawaii State Energy Office is working with its partners to invest millions of dollars of Volkswagen Environmental Mitigation Trust funds to promote the reduction of vehicle emissions in Hawaii. In addition to mitigating the lifetime excess nitrogen oxide emissions of the VW vehicles the plan will help accelerate the electrification of Hawaii's ground transportation, which is necessary to meet the state's clean energy goals. Moving toward a cleaner transportation sector is key since it accounts for about half of all energy sector emissions in Hawaii.

In our second feature story we take stock of the many new renewable energy installations coming online that are expected to help Hawaii hit its interim 2020 target for the percentage of electricity sales from renewable energy. That percentage, known as the renewable portfolio standard, is on track to reach or exceed the statutorily mandated 30 percent target for 2020. The recent growth of renewable energy projects also reminds us that the Energy Office must play a larger role in finding suitable locations for the projects in our space-constrained state, and that affected communities must be engaged earlier so any potential concerns can be addressed in a timely manner.

FEATURED STAFF: LEVERAGING THE HAWAII GREEN BUSINESS PROGRAM

CHRIS BARTOLOME
HAWAII GREEN BUSINESS PROGRAM MARKETING INTERN



Being from the Big Island - the land of lively wildlife, dense forestry, and acres of lava rocks - I developed an appreciation for the aina's resources and scenery. Hawaii is home to some of the most unique and endemic plants and animals and has one of the richest cultures in the world. Therefore, it is our responsibility to find clean energy solutions that take into account environmental and cultural considerations.

Working at the Hawaii State Energy Office is full of opportunities - you never know who you are going to meet or what event you'll attend next. The office is filled with the most knowledgeable, charismatic, and liveliest people to work with and I can't forget about the snack cabinet. I have the great opportunity to be working with a wonderful group of people on the Hawaii Green Business Program where I am able to help promote, recruit, and recognize businesses, hotels and government agencies for their environmental and social impacts in the local community.

I am very fortunate to be a part of this organization which has allowed me to get a foot in the door of government and to meet various people who have influential impacts on Hawaii's economy and industries. Through my journey I have learned about many progressive initiatives and programs developed by various entities to provide Hawaii a better future for generations to come. I am hopeful that efforts being undertaken by these businesses will provide a foundation for others to learn from as we find ways to help make Hawaii an efficient and sustainable home for all.

Chris is a senior at Hawaii Pacific University studying marketing and finance.

OUR VISION

A Hawaii-powered clean energy economy.

OUR MISSION

The Hawaii State Energy Office is committed to promoting energy efficiency,
renewable energy, and clean transportation to help
achieve a resilient, clean energy, decarbonized economy.

LEADING THE CHARGE

The 50 by 2020 Initiative

The Hawaii Green Business Program is proud to announce the *50 by 2020* initiative targeting 50 businesses, government agencies and organizations to participate and be recognized in 2020. This statewide effort to increase the impact and reach of the green business program includes recruiting, recognizing and promoting the 50 entities for their green implementation measures throughout the year. Learn more about this exciting initiative at greenbusiness.hawaii.gov/50by2020/.

Hawaii ranks #5 for LEED Green Building

Hawaii ranks #5 in the U.S. Green Building Council's listing of states with LEED certified spaces. Hawaii certified 12 LEED projects in 2019 amounting to 3 square feet of LEED-certified space per resident. LEED is the world's most widely used and recognized green building rating system. Hawaii's top five ranking proves energy efficiency boosts Hawaii's clean energy efforts by lessening the amount of energy used.

"There is established the Hawaii State Energy Office . . ."

Act 122, Sessions Laws of Hawaii 2019, found that management and direction of the energy sector of the state economy is an increasingly complex and critically important job. Act 122 established the Hawaii State Energy Office to promote energy efficiency, renewable energy, and clean transportation to help achieve a resilient, clean energy, decarbonized economy. Act 122 has been codified as section 196-71 of the Hawaii Revised Statutes.

The 50 by 2020 Initiative

Hawaii ranks #5 for LEED Green Building

"There is established the Hawaii State Energy Office . . . "

LATEST ROUND OF FUNDING TO EXPAND EV CHARGING NETWORK

Hawaii has received $1.2 million in its latest allocation from the Volkswagen Environmental Mitigation Trust to help purchase, install and maintain approximately 20 to 30 light duty electric vehicle charging stations at strategic locations throughout the state.

To date, Hawaii has received three allotments totaling roughly $1.8 million from the Trust, which provides funding nationwide to mitigate the environmental damage caused by VW's use of illegal devices to hide the excess pollution in certain diesel-powered vehicles during emissions tests. Hawaii's total allocation under the settlement with Volkswagen is $8.125 million. The Hawaii State Energy Office (HSEO) is the primary agency charged with expending the Trust funds and executing the environmental mitigation projects funded by the Trust in Hawaii.

The latest round of funding was approved and disbursed by the Trustee in December 2019. The planned charging stations may include a mix of Level 1, Level 2 and DC fast chargers focusing on three scenarios: installing charging stations at government-owned properties, installing charging stations at workplaces, and supporting charging network connectivity locations. The overall goal is to help expand Hawaii's statewide EV charging network and support government fleet electrification efforts.

"The program seeks to support workplace or daytime charging infrastructure to align with peak solar generation periods," said June Chee, HSEO clean transportation analyst. "Ideal EV charging infrastructure will also serve the needs of both private EV owners and public fleets, maximizing charging infrastructure utilization and increasing EV adoption," she said.

The HSEO is taking a holistic approach to deploying the Trust funds in alignment with Hawaii Revised Statute 226-18(a)(2), which states in part that energy planning shall give "due consideration to increased energy security and self-sufficiency through the reduction and ultimate elimination of Hawaii's dependence on imported fuels for electrical generation and ground transportation." In addition, Act 122 of 2019 directs the HSEO to promote clean transportation as part of the Office's expanded mission to assist in the decarbonization of Hawaii's economy.

The HSEO has been able to boost the impact of the VW Trust funds by obtaining additional matching federal funds from the U.S. Environmental Protection Agency. The first funding request approved by the Trustee in May 2019 was for $230,087 to assist with the procurement of two battery electric busses to be operated by the City and County of Honolulu on a new three-mile route through downtown. Use of the Trust funds allowed the State Department of Health's Clean Air Branch to leverage $113,088 of additional matching funds from the EPA for the project.

The second funding request, approved in September 2019, was for $316,494 that was paired with $158,247 in matching EPA funds. The program will provide incentives to fleet owners to purchase electric busses and will replace at least two diesel busses in its first year with an anticipated reduction in nitrogen oxide emissions of 2.89 tons.

The HSEO's funding requests are in accordance with a Beneficiary Mitigation Plan approved by the Trustee in early 2019. The HSEO drafted the plan after soliciting public comments on a range of eligible mitigation actions outlined in the settlement between Volkswagen and the federal government.

More information on the Volkswagen Environmental Mitigation Trust administered by the HSEO is at energy.hawaii.gov/vw-settlement/vw.

PROGRESS TOWARD HAWAII'S RENEWABLE FUTURE

Hawaii is poised to reach two significant milestones by the end of this year in the ongoing effort to eliminate the use of fossil fuels in the electricity sector.

A surge in grid-scale solar photovoltaic installations on Oahu and Kauai, combined with steady growth of rooftop PV systems across the state, is expected to enable Hawaii's two electric utilities, on a combined basis, to reach or surpass the upcoming 2020 statewide target for key renewable energy metric known as the renewable portfolio standard (RPS), industry observers say.

The RPS, which represents the share of utility electricity sales from renewable sources, stood at 27.6 percent statewide at the end of 2018, the most recent period for which Hawaii's electric utilities have reported data. Chapter 269 of the Hawaii Revised Statutes sets interim RPS targets of 30 percent by the end of 2020, 40 percent by the end of 2030 and 70 percent by the end of 2040, on the way to 100 percent by the end of 2045.

The Kauai Island Utility Cooperative (KIUC), which accounts for about 5 percent of statewide electricity sales, has already eclipsed its 2020 interim RPS target, reaching 43.4 percent at the end of 2018. Hawaiian Electric recorded an RPS of 26.7 percent at the end of 2018 across its three operating companies that serve the rest of the state. The two utilities are expected to release their 2019 RPS reports in the coming months; final 2019 performance will be available then.

The 2019 statewide RPS will get a major boost from the completion of several utility-scale projects and approximately 3,500 rooftop PV systems installed in 2019 that resulted in a 157-megawatt jump in Hawaiian Electric's solar generating capacity, the largest annual increase in the company's history. KIUC added to its impressive renewable energy portfolio in 2019 with the commissioning of a 20-megawatt PV facility in Lawai, which includes 5 hours of battery storage, thus allowing roughly 100 megawatt hours of solar energy to be moved to the evening peak.

In addition to the recently installed projects, Hawaiian Electric has completed two rounds of competitive bidding for new renewable projects that will help lay the foundation for meeting the 40 percent RPS target by 2030. On Kauai, the new solar farm with storage being built at the Pacific Missile Range Facility is expected to go online in 2020.

Hawaii also is on track to meet its energy efficiency goals, including interim targets under the energy efficiency portfolio standard (EEPS). The EEPS mandates a 4,300-gigawatt-hour reduction in electricity use by 2030 through efficiency and conservation measures. Hawaii exceeded its 2015 interim EEPS target and is on track to meet the 2020 interim target, according to a report from the Hawaii Public Utilities Commission.

The Hawaii State Energy Office supports a host of programs that are helping the state meet both its RPS and EEPS targets. Through its Developer & Investor Center, Self-Help Energy Suite, and HAVEN, the Energy Office assists stakeholders in the appropriate and informed development of renewable energy projects that contribute to the RPS. Two key areas where the Energy Office is helping Hawaii meet its EEPS are through its efforts to upgrade the energy code for construction of homes and buildings and promoting an innovative clean energy financing tool known as energy performance contracting.

ENLIGHTENING NEWS & UPDATES

Report: Powering Paradise - How Hawaii Is Leaving Fossil Fuels and Forging a Path to a 100% Clean Energy Economy
Rocky Mountain Institute (February 2020)

Name in the News: Scott Glenn
(Honolulu Star-Advertiser, 1/31/20)

Governor Calls For More Renewable Energy Development, Including Hydropower, Offshore Wind
(Hawaii Public Radio, 1/29/20)

Hawaii Energy launches new electric vehicle charging incentive program
(Pacific Business News, 1/13/20)

Check out some of the energy projects coming online in 2020
(Pacific Business News, 1/02/20)

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