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THE CURRENT serves Hawai'i's communities, businesses, and policy makers in making informed decisions about clean energy investments and policy. Hawai'i'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 Hawai'i.

WORKING TOGETHER, CREATING
ENGAGEMENT IN THE CLEAN
ENERGY TRANSITION

Scott J. Glenn, Chief Energy Officer

Achieving our clean energy future is complicated but necessary, extending beyond installing solar on



every roof. Energy is deeply interconnected with everything we do and touches every aspect of our lives, even in small and unexpected ways. For example, this newsletter is brought to us all by oil from Libya and Russia, and coal from Indonesia, brought here in regular shipments across the ocean powered by burning oil, refined into fuel and burned in power plants to make electricity. Even if you are reading this in your home powered with rooftop solar, backed up by a home battery, the power that connects your home and your computer to the rest of the world, including data centers, grocery stores, hospitals, and other things you depend on for daily

life, all depend on this oil and coal.

We send more than \$3 billion out of state every year, exporting our greenhouse gas emissions and land use needs and creating jobs and economic development in other places while fueling global warming, causing the coastal and inland flooding and other climate impacts we increasingly experience.

As a small state in the middle of the ocean, we are dependent on the rest of the world for our way of life. Our energy, our food, our economy in the form of tourists, come to Hawai'i every year on jet fuel and bunker fuel.

Many of us are having intense discussions across the islands about what kind of life we want. How self-sufficient can we be? How do we *huki like* to be more self-sufficient and have a more circular economy? How do we become more resilient?

The Hawai'i State Energy Office is leaning into these discussions more and more to do our part in promoting energy efficiency, renewable energy, and clean transportation to achieve a resilient clean energy economy no later than 2045 and as quickly as practicable.

Through community engagements over the past year, the HSEO heard that Hawai'i's communities need a better understanding of Hawai'i's energy ecosystems, including energy production, delivery, and project development. This understanding of our energy ecosystem is essential for meaningful community and energy industry stakeholder engagements and outcomes. HSEO is establishing an ongoing program to provide energy ecosystem information and to gather and share the public's interests and concerns. Early community and stakeholder engagement enables policy makers and project developers to proactively address critical stakeholder concerns and interests, and to increase the benefits of clean energy for project host communities, which is essential to accelerate progress toward our clean energy economy goals.

It will take everyone in Hawaii working together to achieve an equitable, resilient, decarbonized economy. We're working with all stakeholders including industry, state agencies, counties, NGOs and communities. We've established a Civic Advisory Group and with Hawaii Energy and others we helped establish the Hawaii Energy Equity Hui that, along with our VISTA equity team, is helping to inform our planning and program development. To enhance this effort, we're building our outreach and communications capacity by revamping our website to be more accessible and interactive to share information about Hawai'i's clean energy ecosystem and energy project development, facilitate virtual and in-person conversations, and amplify the many perspectives and needs to achieve our clean energy transition equitably.

I welcome your thoughts and participation as we move forward together toward our clean energy future.

FEATURED STAFF: RENEWING THE ENERGY EFFICIENCY FIELD

*Maria Tome, Managing Director,
Energy Efficiency and Renewable Energy*



Maria Tome, Managing Director, Energy Efficiency and Renewable Energy (EERE) for the Hawaii State Energy Office, is a licensed Professional Engineer with a master's degree in public administration and over twenty years of experience in renewable and transportation energy in Hawaii. Maria has been involved in developing statewide energy strategies; resource assessments; policy analyses; environmental assessments; and technical reviews of electricity and fuel production, distribution, and use. In these endeavors, Maria worked closely with local and national industry, environmental, community, and energy experts, and was involved with standards bodies and regulatory agencies.

Under Maria's leadership, the EERE supports renewable energy projects and initiatives to help the state achieve its renewable energy targets. Some of the programs include the Powering Past Coal Taskforce and the Energy Efficiency for State Buildings Project.

Governor David Ige's Powering Past Coal Task Force (PPCTF), chaired by Chief Energy Officer Scott Glenn, was established to assist energy industry stakeholders to accelerate appropriate renewable energy project development to ensure energy reliability when Oahu's coal plant is closed in September, 2022.

Oahu's only coal-fired electrical generator is the second largest single source of GHG in Hawai'i, accounting for the emission of 1.43 million metric tons of carbon dioxide in 2017 (the most recent year for which data is available). Since the facility also produces a significant amount of Oahu's electricity, it is important that the start dates for operation of the replacement projects be aligned, as much as possible, to allow for a seamless transition from coal to the other energy sources.

The PPCTF mandate is to "convene stakeholders to increase transparency, coordination, collaboration, and urgency to timely facilitate, coordinate, and align project development and reviews by Hawaiian Electric, state, and county agencies for those measures anticipated to provide electricity for Oahu to replace the coal plant's electricity...". More information about the [Powering Past Coal Taskforce](#) can be found on the HSEO website.

The Energy Efficiency for State Buildings Projects' purpose is to conserve energy, lower state energy costs, and help expedite Hawaii's energy security by accelerating our journey to 100% clean energy. The State of Hawai'i is leading by example to reach its goal of a 25% reduction in energy consumption by 2025. Since 2000, 166 Hawai'i buildings have received the ENERGY STAR certification. During this time, HSEO has helped benchmark 83 state facilities. For six consecutive years, Hawai'i has been awarded the Energy Services Coalition's (ESC) Race to the Top in recognition for leading the nation in per capita performance contracting for state and county buildings.

CLEAN ENERGY VISION

The State of Hawaii has a bold energy agenda – to achieve 100 percent clean energy by the year 2045. Along with reducing our islands' dependency on fossil fuels and increasing efficiency measures, the clean energy plan is also contributing to the state's economic growth. Because Hawaii is committed to re-powering the clean energy market, we have embraced bold solutions that will help develop this competitive industry making Hawaii one of the leaders in the clean energy race.

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

Hawai'i Carbon Price Study

This first-ever Hawaii-specific study was prepared for the Hawaii State Energy Office by the University of Hawaii's Economic Research Organization (UHERO) as part of Act 122, Session Laws of Hawaii 2019. In authorizing the study, the Hawaii State Legislature stated that "climate change [was] expected to cost the State at least \$19,000,000,000 in losses from sea level rise alone, making the switch to renewable energy and the ultimate reduction of atmospheric carbon a priority." The study includes an illustrative range of tax amounts to explore options for achieving Hawaii's policy goals. The Hawaii-specific modeling scenarios are important for deliberations at the Legislature and to further public understanding of how carbon pricing could address the climate crisis, while enhancing Hawaii's economy and caring for the most vulnerable among us. Learn more about the at the [Hawaii Carbon Pricing Study](#) at the HSEO website.

State's Transition To Zero-Emission Fleets

As a part of the State's initiative to be carbon-negative by 2045, the State has partnered to procure 44 electric vehicles, continuing the transition of its fleet to zero-emission passenger cars. Based on analyses performed by the State, the Tesla Model Y was selected for the fleet transition as it is at least 12% cheaper than comparable EV models. Back in 2019, HSEO, county representatives, and others attended a retreat hosted by the Rocky Mountain Institute to discuss solutions to tackle the large-scale transition of ground transportation fleets to zero-emission vehicles. One idea that came out of the retreat was to procure electric vehicles as a service. Rather than spending \$40,000 per vehicle up front, the State is charged a monthly per-mile usage fee (which includes the charging infrastructure—a very expensive component) making it easier and more affordable for state and county agencies to budget the cost and return

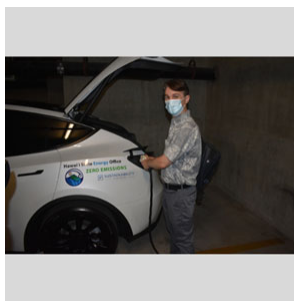
greater value on tax payer dollars. Use of this service contract is expected to save approximately 75 percent in vehicle maintenance over the lifespan of each vehicle and an average of \$287 per vehicle per year in fuel costs. HSEO and the Department of Transportation are leading the way for Hawai'i to reduce its dependence on imported fossil fuels, and our success can demonstrate that the large-scale transition to zero-emission vehicles is possible.

Energy Financial Assistance Resource Database

In December of 2020, the HSEO hired three AmeriCorps VISTA members who are tasked with the responsibility of increasing equity, reducing poverty, and engaging with the community on energy-related issues. Some HSEO staff and partner organizations noticed a dearth of centralized databases focusing on energy financial assistance resources for low-to-moderate income households, and tasked the VISTA members to create a solution to this issue. James McCallen, the Energy Affordability Specialist, collaborated with energy partners including Hawai'i Energy and County Energy Offices to compile a list of financial resources like LIHEAP and GEMS to build an easily-accessible database for the programs. This resource will be used to develop future community outreach and engagement initiatives, with the main purpose of connecting residents to the appropriate programs to reduce their energy utility bills and increase their access to renewable energy options. With the assistance of Revere Wood, the Community Engagement and Communications Specialist VISTA, the [Energy Financial Assistance Resources Database](#) is live on the HSEO website.



[Hawai'i Carbon Price Study](#)



[State Transition to Zero-Emission Fleet](#)



[Energy Financial Resources Database](#)



U.S. DEPARTMENT OF ENERGY AND NREL SELECT KAUA'I COUNTY AND HAWAIIAN ELECTRIC FOR ENERGY TRANSITIONS INITIATIVE PARTNERSHIP PLANNING (ETIPP)

Two Hawai'i organizations, Kaua'i County and Hawaiian Electric, were selected to be a part of the US Department of Energy's Energy Transitions Initiative Partnership Planning (ETIPP). ETIPP collaborates with some of the nation's most vulnerable communities to transform their energy ecosystems and reduce economic risk. A network of experienced organizations including the National Renewable Energy Laboratory, Hawaii Natural Energy Institute, HSEO and others will work with Kauai and Oahu communities to prioritize energy challenges, values, goals and opportunities; identify and implement strategic, whole-systems solutions; and foster high-impact replicable community energy transitions. Learn more about the ETIPP program at the Department of Energy's website.

Kaua'i will explore alternative and autonomous mobility options for its residents and tourists to move away from fossil-fuel power single occupancy vehicles and toward a modern, clean transportation system. Ben Sullivan, Energy and Sustainability Manager at County of Kaua'i, states "Kauai County is eager to engage with State and National partners to look at how emerging mobility can support our goal to shift visitor transportation away from single occupancy vehicles and into other modes. The ongoing rental car crisis has helped bring focus to this critical issue Statewide, and we know that systems like like shuttles, bike share, and car share will need to be carefully integrated with supporting

policies in order to help visitors choose alternatives to the conventional ‘length of stay’ rental.”

Hawaiian Electric’s project will create a map to help identify areas on Oahu that can support microgrids for increased energy resiliency and grid security. Microgrids can help protect communities at risk of isolation during prolonged outages by continuing to supply electricity through a variety of grid-connected resources like solar panels, batteries, and back up generators. The Oahu microgrid map would allow developers to contact potential microgrid participants and work with Hawaiian Electric to apply for the development of a specific microgrid.

“For our island state that has long depended on imported oil, a clean energy future means resiliency and economic security. I want to thank the Department of Energy for selecting two Hawai’i communities for the Energy Transitions Initiative Partnerships Project. These projects address two of the most important steps in achieving our goal to become carbon negative by 2045—clean transportation and grid improvements,” said Senator Brian Schatz.

“I applaud the Department of Energy for helping island communities plan the best way to meet their unique energy needs in a more affordable, resilient, and sustainable way. The Energy Transitions Initiative is focused on embracing local knowledge and helping community organizations use federal expertise and assistance to find solutions to the unique energy needs of each island community. Accelerating assistance will speed up Hawai’i’s transition to renewable energy for our vehicles, homes, and businesses in the face of climate change challenges,” said Senator Maize Hirono.



HAZARD MITIGATION GRANT PROGRAM AWARDED TO HAWAI'I



The fundamental lifelines of Hawai'i are its energy resources and the systems that deliver energy. These lifelines help ensure the continuous operation of essential business and government functions, and are essential to human health, safety, and economic security.

Through the Hazard Mitigation Grant Program (HMGP), the Federal Emergency Management Agency (FEMA) has awarded the State a 2-year grant that will bolster the effort to mitigate natural disaster risks and vulnerabilities to these energy lifelines in Hawai'i. The grant focuses on reducing long-term vulnerability of O'ahu's communities and properties to natural hazards, concentrating on risks to community lifelines and critical energy infrastructure and facilities.

As an awardee, the Hawaii State Energy Office (HSEO) may use HMGP Advance Assistance Pilot grant funding to develop mitigation strategies and obtain data to prioritize, select, and develop complete HMGP applications in a timely manner. This will help accelerate the implementation of these mitigation strategies. The Advance Assistance Pilot includes any applications under the new Building Resilient Infrastructure and Communities Pre-disaster Hazard Mitigation Program.

The FEMA Advance Assistance project will utilize available federal grant funds to strengthen Hawaii community hazard mitigation awareness and partnerships. The HSEO project team will leverage existing hazard mitigation, emergency management, homeland security, and industry subject matter expertise and local knowledge to evaluate essential energy supply chains, key facilities, and high-risk areas on O‘ahu. This work will inform further project tasks and analyses necessary to develop general and location-specific prioritized energy hazard mitigation actions.

By identifying and mapping hazards to specific lifeline facilities and areas, the HMGP and project participants will be provided with information and tools needed to integrate energy mitigation and resiliency factors into their emergency response plans, infrastructure planning, and investment decision-making processes.

The activities of this project will help Hawaii communities and critical facility owners/operators become more aware of appropriate energy mitigation strategies and assist them in making better informed decisions on available options to increase the resiliency of their business or public service operations to the hazards in their area.

Having a baseline understanding of energy risks when evaluating critical lifeline facilities and areas to determine appropriate mitigation actions also supports the State's overall mitigation strategy and plans. This shifts the focus away from costly and reactive disaster spending and toward research-supported, proactive investment in community and infrastructure resilience. This type of mitigation planning is key to breaking the cycle of disaster damage and reconstruction. HSEO is excited to work with multiple partners to seek ways to offer multiple benefits to our communities, in addition to the benefit of energy system risk reduction.



ENLIGHTENING NEWS & UPDATES

Earth Week Highlights

Governor Ige participated with international leaders and climate experts throughout the week of President Biden's Leaders Summit on Climate. The HSEO supported Governor Ige in these dialogues, culminating on Earth Day, when Governor Ige hosted the Facebook Live event "Our Common Future": the Governor's Talk Story with Captain Lehua Kamalu of the Hōkūle'a Crew and Dr. Victoria Keener of the East West Center and Pacifica RISA, moderated by Dr. Robert Perkinson of the University of Hawai'i. Governor Ige and his esteemed guests discussed the importance of the regional perspective on the state of climate change and what Hawai'i's communities need to transition to a clean, sustainable future.

[Hawaiian Electric Offers Preparedness Tips This Hurricane Season](#)

(KHON2, 06/01/21)

[Renewable Energy Can Power Three O'ahu Army Installations During Emergencies](#)

(Maui Now, 06/07/21)

[Share of O'ahu Photovoltaic Panel Installations with a Battery Component Reaches All-Time High](#)

(Pacific Business News 06/07/21)

[Editorial: Sensible Rules for Wind Turbines](#)

(Honolulu Star Advertiser, 06/09/21)

FOR SCREEN READER USERS. THE HAWAII STATE ENERGY OFFICE RECOGNIZES THE USE OF DIACRITICAL MARKINGS OF THE HAWAIIAN LANGUAGE SUCH AS THE 'OKINA (ALSO CALLED A GLOTTAL STOP) AND THE KAHAKŌ (ALSO CALLED A MACRON). PLEASE NOTE THAT SCREEN READERS MAY NOT READ OR PRONOUNCE THE HAWAIIAN WORDS CORRECTLY.

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