





Aloha,

Welcome to our Annual Report for Program Year 2019-2020. I hope you will enjoy the new format of this report, and I want to start by saying thank you to our partners, stakeholders, and beneficiaries who support and participate in our mission of helping Hawai'i's families and businesses make smart energy choices.

We began the year celebrating our 10 year anniversary — a decade of producing lower bills for customers while taking significant leaps toward our 100% clean energy future. It was also the first year in Hawai'i Energy's three-year model of planning and implementation, a new format that allows us to develop longer-term strategies and interventions to help drive deep energy savings in our community. We thank those who participated in our stakeholder meetings, whose input on identifying our strengths and market gaps allowed us to broaden our reach and impact by going beyond traditional energy efficiency. This work resulted in the many new programs and services we launched in this first year, and is helping to accelerate Hawai'i's clean energy transition through programs like electric vehicle charging station incentives and smart devices - helping customers become prosumers instead of just consumers.

Throughout the year we provided rebates to over 13,000 residents and touched many more through our educational efforts, reducing energy usage by over 134 million kilowatt-hours and saving over \$39 million that will ultimately get reinvested into our local economy. Our refreshed focus on making energy-saving tools more accessible and affordable led to expansive support for vulnerable children, families and individuals in reducing their energy burdens and increasing their understanding of their monthly costs.

Like many, we were saddened and challenged by the harm COVID-19 has done to our economy, particularly surrounding drastic changes in energy usage by families at home and businesses facing limited or no operations. Not even a year into our implementation cycle, we quickly pivoted to provide immediate aid to individuals and families most impacted. We provided over 2,100 home energy kits to those needing it most, and shared customized resources to help customers better manage their energy use. At the end of the year, we filed our revised programming for the remainder of 2020 and beginning of 2021 with the Public Utilities Commission as the pandemic continues and our offerings will need to change as well.

As we enter the remainder of 2020, it is my hope we can continue to come together as a community to get through this pandemic. The benefits of energy efficiency have never been greater, while at the same time the ability to buy energy-saving equipment has become much more difficult because of widespread financial hardships. Our commitment to you is that we will be there for Hawai'i's families and businesses through this challenging time, much as we have through our first decade. Mahalo!

Bu Kea Brian Kealoha

Hawai'i Energy Executive Director

Hawaiʻi Energy Empowers the People of Hawaiʻi

OUR MISSION

is to empower island families and businesses to make smarter energy choices to reduce energy consumption, save money, and pursue a 100% clean energy future.

OUR COLLECTIVE GOAL

4,300 GWh savings by 2030

Since 2009, the Hawai'i Energy program has been a critical player in raising awareness about and inspiring a shift toward 100% clean energy generation across the state. The program, administered by a small, dedicated team under contract with the Hawai'i Public Utilities Commission, oversees a portfolio of over 40 different offerings.

Through a solid network of community partners and the kuleana of an evergrowing amount of residents and businesses who lead by example, Hawai'i has saved over \$1 billion in energy costs through efficiency efforts alone.

PROGRAM YEAR 2019-2020 SUMMARY

BUDGET TOTAL : \$ 29,224,627

TOTAL PROGRAMS OFFERED : 40+

CLEAN ENERGY TECHNOLOGIES



Financial Incentives via Rebates

New for PY 2019:

- EV charging stations
- Demand response & grid interactive technologies



Technical Advising

New for PY 2019:

 Expanded Energy Advisor teams in all three counties to drive deeper energy savings

AFFORDABILITY & ACCESSIBILITY



'Going Deeper" On New & Potential Participants

New for PY 2019:

- ALICE family focused programs
- New measures in Energy Advantage program
- Expanded EmPOWER participation and measures
- Direct to consumer purchases with nonprofits

MARKET TRANSFORMATION



Customer Education to change behavior

New for PY 2019:

Targeted student outreach



Growing Workforce

New for PY 2019:

- Clean Energy Ally recognition and rewards
- Expanded professional certifications



Influencing the Supply Chain



Energy Codes and Standards

New for PY 2019:

- Education and compliance training
- Advocacy for code adoption legislation



Longer term Strategic Planning that is data-driven

New for PY 2019:

- Clean Energy Innovation Hub
- Started 10-year roadmap



134.3 million kWh

Electricity saved in 2019 could power 22,383 Hawai'i homes for a year!



\$39 million Dollars **REINVESTED INTO**

HAWAI'I'S ECONOMY



Every \$1 INVESTED



Results in \$10.50 SAVED



96,800 metric tons of GHG (greenhouse gas) emissions



225,100 barrels of oil AVOIDED

Numbers of people who lowered their electricity usage by Hawai'i Energy program offerings

10,225

Residents

794
Businesses

1,354

Residents

132
Businesses

1,433

Residents

116
Businesses

COVID-19

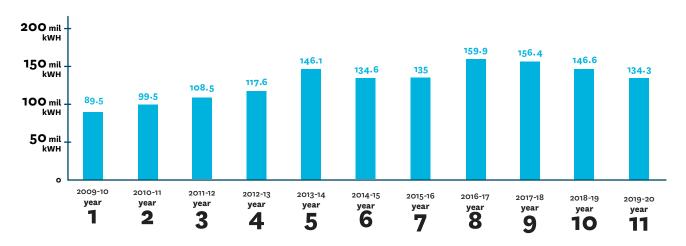
Governor Ige's statewide "Safer at Home" Lockdown orders began on March 23, 2020, directly affecting Hawai'i Energy's PY2019 Q3 and Q4 results. Like many other organizations, our teams quickly responded by adapting workflow processes from home offices.

Each team not only adjusted internal processes to the new challenges, but pivoted programs and offerings to make sure customers were safe and supported moving forward. We continue to be sensitive and strategic with our messaging and aware of how our programs can continue to contribute to Hawai'i's economic recovery, starting with empowering customers to experience the ever-multiplying benefits of clean energy.

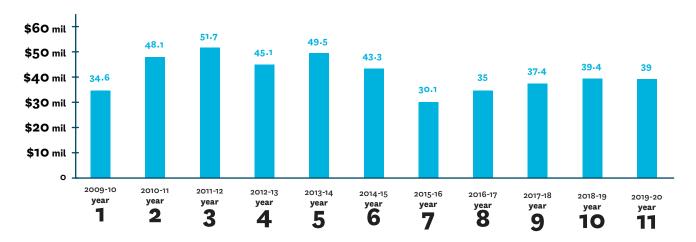
Throughout
the Annual Report
look for the
"Responding with
Aloha" callouts
to see the ways
our teams
responded to
COVID-19

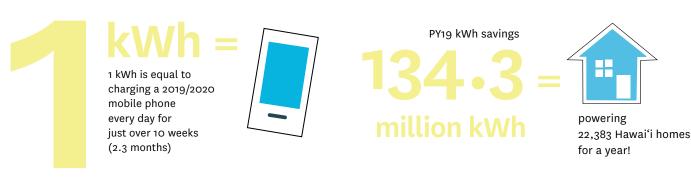
Hawai'i Energy ranks in the top third of efficiency programs nationally for its performance

ENERGY EFFICIENCY SAVINGS ACHIEVED BY HAWAI'I ENERGY, MILLIONS OF KWH



TOTAL DOLLAR SAVINGS ACHIEVED BY HAWAI'I ENERGY, MILLIONS OF DOLLARS





Toward a Greener Energy Future

As a state, Hawai'i was the first to commit to generating 100% of our electricity by clean sources by 2045, and if successful, would serve as an example for the rest of the nation.

Hawai'i Energy is on a mission to help get us there. Learning how we can take steps—even small ones—and encouraging others to do the same, is a critical and

often undervalued piece of the equation.

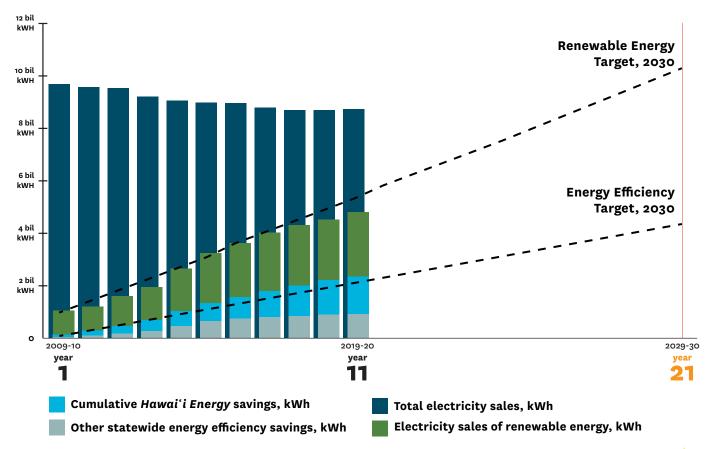
Energy efficiency continues to be the cheapest and easiest form of clean energy, requiring less energy generation to be built by reducing energy usage first. Energy efficiency also provides additional benefits to our community, including giving you a little extra money back each month.

Energy efficiency is something everyone can participate in, no matter your age, income, or where you live.

HAWAI'I IS ON TRACK TO MEET ITS ENERGY EFFICIENCY TARGET BY 2030

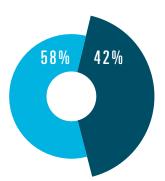
HAWAI'I CLEAN ENERGY INITIATIVE (HCEI)

Achieve 70% Clean Energy by 2030: 30% from Energy Efficiency, 40% from Renewable Energy This 2030 goal is a milestone to achieving the 2045 HCEI target of 100% clean energy



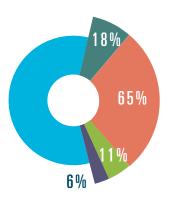
Expanding Opportunities for Community Resilience Across the State

AFFORDABILITY & ACCESSIBILITY (A&A) PROGRAM



Nearly half of all households in Hawai'i are ALICE or below *

ALICE =
Asset Limited,
Income Constrained,
Employed



ALICE households by county *

Hawaiʻi island 34,351

Oʻahu 123,283

Maui nui 22,173

Kauaʻi 9,919

OVERVIEW

Our mission is to make energy efficiency available and accessible to all Hawai'i residents. With Hawai'i's high cost of living, 44% of our residents in the state are considered ALICE and below (Asset Limited, Income Constrained, Employed): nearly half of our population is living paycheck to paycheck. Understandably, with little disposable income to invest in energy efficiency, it's critical we address these needs to bridge the gap. In order to accomplish this lofty goal, we knew we needed to get creative in how we drive change and action in the community.

We carried out intentional and focused outreach, and leveraged personal connections and partnerships to reach these communities. Our work this year showed us that even something like buying an appliance involves many labor-intensive steps; and even more so when you are trying to provide services on a larger scale. Although Hawai'i Energy does ultimately hope to see energy reduction in these communities, helping overcome social and relational barriers is also critical and takes time. Through experiencing these challenges, we've recognized the need to reassess our programs and make them even more accessible in the coming years.

^{*}ALICE data from Aloha United Way, 2018 ALICE: A Study in Financial Hardship in Hawai'i Report





"As much as I'd like to say everyone has chosen to buy an energy efficient, appliance because they care about our 'āina, I know that the price tag is often the main driver of change. As Molokai begins to see the decrease in their energy consumption, and consequentially their electric bills, they won't be able to deny the fact that this investment has not only paid, for itself but will continue to afford us? the opportunity, and the incentive, to choose the more sustainable/aloha 'āina option in all aspects of our lives."

— LEILANI CHOW,

Kawela, Molokai resident and Project Manager for "Hui Up" with Sustainable Molokai

New appliance owner Arthur Kaupu of Pu'u Hauole, Molokai picks up his refrigerator from Makoa Trucking's delivery lot where all the Hawai'i Energy "Hui Up" appliance exchanges are held. Tanya Mendija of Sustainable Molokai, partner organization with Hawai'i Energy, assists.



HUI UP" APPLIANCE TRADE-IN WITH MOLOKAI RESIDENTS

Particularly for neighbor island families, the appliance shopping process is riddled with obstacles. On Molokai, where residents face some of the highest electricity bills in the nation, there are no appliance stores, meaning that they not only need to shop on Maui, but they are limited by price and delivery options. This also creates a culture of holding on to old appliances until they break, and replacing these appliances can mean thousands of dollars in savings over their lifetimes. Hawai'i Energy's "Hui Up" program expedites the traditional supply chain, leveraging the program's relationships with appliance distributors and delivery companies to bring a selection of energyefficient appliances to Molokai residents at a discounted price, while ensuring that old appliances are properly recycled. "Hui Up" has grown from being one delivery a year to several visits, coupled with in-home energy audits to help residents learn more about their energy usage.

9,639,604

appliances through

"Hui Up"

since 2013!

Cumulative kWh Savings \$3,471,239

Cumulative Bill Savings

"Big time help, eh you know I was so surprised when I saw my electric bill, I thought the thing was not real, it has dropped substantially with the new refer and freezer, used to be about \$140-\$160 a month, last month it was \$67! It's really good I'm really happy, so glad I did it, especially now with everyone not having jobs, it's good to stock up on food to feed my family. I talk to plenty other people and they are all so grateful for this program, it has really helped so many Molokai families. And Mahalo Leilani for bringing it back, even the light bulb and shower head program was real good too, my bulbs are still going and I love the flood lights, it's brighter than the old ones I had." - MURPHY KAAHANUI, "Hui Up" participant from Ho'olehua, Molokai



EMPOWER HAWAI'I PROJECT

is a unique opportunity for Hawai'i nonprofits. This cohort-style, hands-on learning program educates nonprofit facility managers on energy efficiency best practices and guides them through completing an energy-saving project at their site. By implementing lessons learned from last year's pilot, we expanded the number of cohort participants as well as the types of energy-saving technologies available to them. The PY19 cohort is scheduled to conclude in December 2020.

2019 Participants

Kapahulu Center
Mililani Presbyterian Church
Salvation Army
Catholic Charities Hawai'i
Bishop Museum
'Ōlelo Community Media
Goodwill Hawai'i

Kapahulu Center has long served as a community hub for locals in the Waikīkī

- Kapahulu area, and has evolved into primarily offering group activities for local seniors. The Center received new LED lighting throughout its 100-year old facility through the EmPOWER Hawai'i Project.





CULTIVATING THE NORTH KOHALA COMMUNITY ON HAWAI'I ISLAND

"My old refrigerator had a loose seal, and was leaking cool air. I got a brand new, ENERGY STAR® refrigerator at such a deal thanks to Hawai'i Energy. They delivered it AND hauled away my old refrigerator too. So pleased, and so grateful!"

— **TONI WITHINGTON,** resident of Hāwī and recent participant in North Kohala's Appliance Trade-Up

We began outreach efforts in this community on the northern tip of Hawai'i island after being notified by HECO of their plans to eventually repair a transmission line and install battery storage – a project that could greatly benefit by lowering overall electricity demand in the area by 10-15%. Our team worked to familiarize ourselves with the community, forge relationships, and eventually start to market

community, forge relationships, and eventually start to market and implement programs like an appliance trade-up and *Energy Smart 4 Homes* installations by working with local nonprofit *Partners In Development*.

Hawai'i Energy team members STEPHANY VAIOLETI and TONY KAWAL give an introduction to Hawai'i Energy's services to residents of North Kohala.

RESPONDING WITH ALOHA DURING COVID-19

For many, saving energy is not always top of mind while trying to meet other basic needs, like rent, food and child care. COVID-19 forced many households into situations where suddenly managing energy usage became a top priority. Households are naturally using more energy as families are working, educating, and playing all from home, and it was important to provide our community with easy tools to help families limit energy usage where possible.

KIDS ACTIVITY PACKS

"It was wonderful that Hawai'i Energy was able to donate to children and to bring a smile to their faces... Mahalo for helping our homeless keiki."

— GINA DUNCAN
coordinated the delivery of
kids' activity packs to Maui's
Ke Ala A Ke Ola Homeless
Resource Center.

Understanding that many parents were struggling to keep their kids busy during the stay-at-home order, Hawai'i Energy saw an opportunity to assist while at the same time educating kids about energy efficiency. Free energy-related activities such as crosswords, mazes, and coloring pages were made available to download online. Alternatively, people could request hard copies, and Hawai'i Energy mailed them out free of charge.

FREE ENERGY KITS



This year we partnered with organizations across the state to distribute 2100 free energy kits via drive-through pick ups. Each kit contained four LED A19 bulbs, one advanced power strip, two bathroom facucet aerators, one fixed showerhead, and educational kids activity packets. These tools can be used immediately to help residents reduce their energy usage.



ENERGY ADVANTAGE PROGRAM FOR SMALL BUSINESSES

403

Participants



Since 2011, more than 5,000 small businesses and restaurants have received free or significantly discounted lighting retrofits through our Energy Advantage program. Building on a solid foundation, we opted this year to increase the incentive level by 25%, as well as make electronically-commutated (EC) motors a measure eligible for increased incentives.

Rooted in Relationships

MARKET TRANSFORMATION & ECONOMIC DEVELOPMENT

PY19 STATEWIDE ACHIEVEMENTS

71

Community Workshops

2,524

Attendees of Community Workshops

1,273

Students that Received Energy Education

12,471

OVERVIEW

Ultimately, achieving our clean energy goals requires a movement — a collective commitment to create constant change, motivated by ideas that influence everything from entire industries down to personal choices. Market transformation describes the work it takes to keep that spark alive, to shift how much we understand about energy in our personal lives, and build the bridges to integrate that into how we work, play and thrive in the world. In Hawai'i, that means:

- working to raise the level of energy literacy at every level in ourcommunities:
- supporting policies and workforce training that make it easier for industries to adopt clean energy practices;
- staying at the cutting-edge of new technology developments; and
- establishing strong relationships that help grow the movement's capacity and reach.

Our collaborations with strong, like-minded partners have made it possible for energy education to be shared in communities of all shapes and sizes, from the classroom to the boardroom. They've helped localize conversations and materials, provide insight into the best methods for success in every arena, and advocated on behalf of our clean energy workforce. This year, our partners provided necessary passion and persistence in implementing some of our most innovative offerings, particularly when COVID-19 all but eliminated in-person events. With electricity costs rising, and the climate crisis becoming more evident locally, residents and businesses alike turn to Hawai'i Energy to be a resource and guide through navigating uncharted waters.





"Change the Politics, Not the Climate" Hawai'i's first student-led climate strike on September 20, 2019 that drew hundreds to the State capitol. Hawai'i Energy's partner Blue Planet Foundation brought together a high school "climate crew," who initiated and organized this youth-led march for climate. Photo credit: Blue Planet Foundation

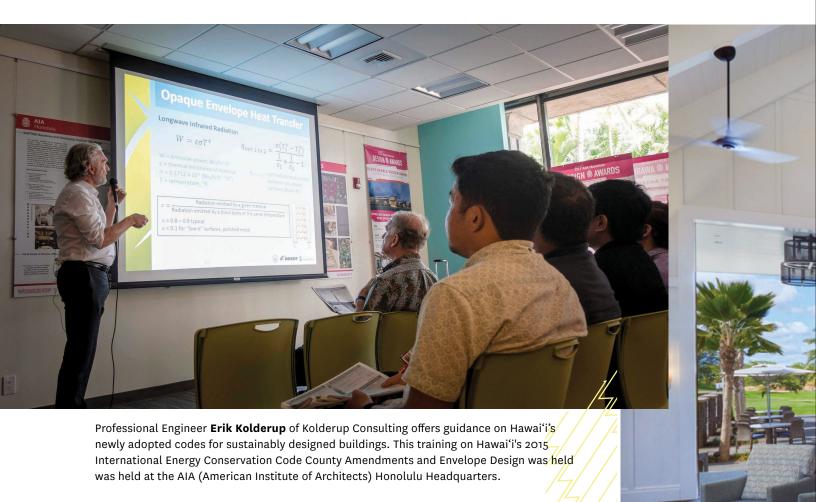


Blue Planet Foundation is one of Hawai'i Energy's community education partners and facilitates several group-learning initiatives to help educate audiences on clean energy in Hawai'i, with energy efficiency being a central theme. This year the Foundation premiered its "Climate Crew" initiative, in which a collective of high school students learned the basics of advocacy and activism in the clean energy space. Later in the year, a Climate Crew member helped to organize Hawai'i's first student-led Climate Strike, a rally that drew hundreds to the State capitol inspired by the Climate Crew and the efforts of global climate activist Greta Thunberg.

"Together with Hawai'i Energy, we are activating the next generation of climate leaders. We've seen through our classroom presentations and workshops that today's students are energized to make real change. They eagerly jump in to deploy tangible solutions, whether that's launching an energy efficiency campaign in their school or organizing community events to raise awareness about key policies that will shape Hawai'i's clean energy future."

— MELISSA MIYASHIRO,

Managing Director of Strategy & Policy, Blue Planet Foundation





OFFERING ENERGY EFFICIENT CODE ADOPTION CLASSES FOR BUILDING DESIGN PROFESSIONALS

For many reasons, energy efficiency is much easier to address at the design stage compared to after a facility or home is built. The Program set out this year with the goal of increasing engagement with the local design and building industries to further encourage sustainable, energy code-compliant, efficient design. After many years of hard work, the 2015 International Energy Conservation Code was finally adopted statewide, and key partnerships with AIA Honolulu and the Hawai'i State Energy Office helped bring necessary education and incentives to this sector to lay the foundations for a new generation of sustainably-designed buildings. Hawai'i Energy continues to foster meaningful connections within the local building design industry to incentivize green – and in particular, energy-efficient – new construction projects.

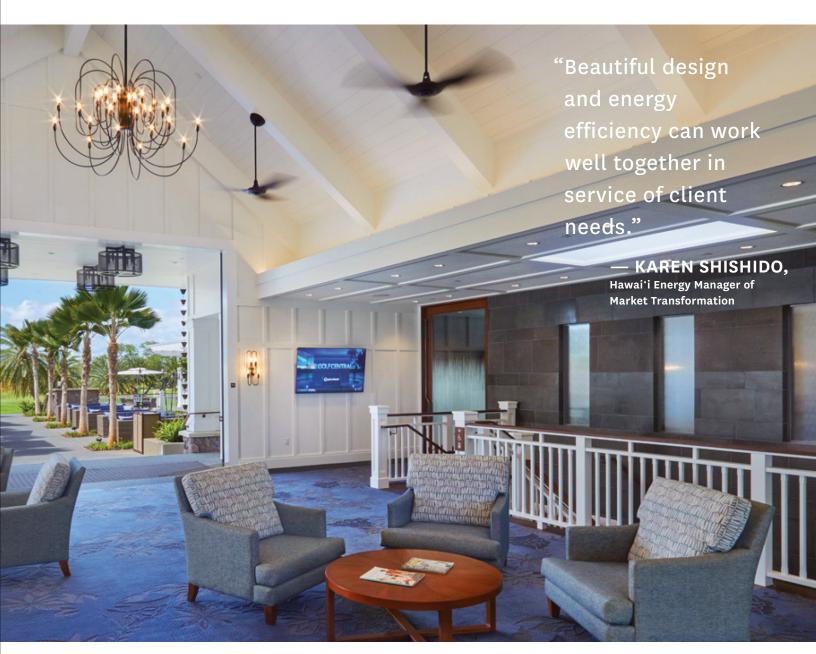




MAKING ENERGY EFFICIENCY CERTIFICATION COURSES ACCESSIBLE TO HAWAI'I PROFESSIONALS

Hawai'i Energy is committed to increasing its local base of qualified contractors and offering the necessary educational opportunities and certifications to better support their needs as providers of clean energy products and services. This not only helps them gain a competitive edge by staying abreast of market trends and technical skills, but helps ensure they can, in turn, successfully educate and support customers in improving their homes and business operations, ultimately growing the economic engine of our State.

Recognized nationally as the highest professional standard for energy efficiency professionals, the prestigious Certified Energy Manager® (CEM) course is one of Hawai'i Energy's most well-attended professional development offerings. The week-long intensive class taught by facilitators from the Association of Energy Engineers consists of multiple days of instruction followed by a full day of testing. Whereas many across the country would need to fly elsewhere to attend classes, Hawai'i Energy provides inperson instruction and tutoring from a vetted instructor, on top of significant tuition subsidies with the goal of making the course accessible to as many local professionals as possible. To date, 278 professionals have enrolled in the CEM certification course offered by Hawai'i Energy.



awarded the first ever "Excellence in Energy Efficient Design" award at the annual AIA Honolulu Design Awards in 2019. The Hoakalei Ewa Beach, includes efficient light fixtures and appliances; building orientations that maximize trade wind cooling; and state-of-the-art controls performance. Pictured is a view of the lobby doorway which allows natural ventilation and a connection to the outdoors. Solar lighttubes on daylight deep into the interior, including the lower level. This award was sponsored by Hawai'i Energy. Photo credit: Peter Vincent Architects

RESPONDING WITH ALOHA DURING COVID-19

6

In-Person Trainings Converted to Virtual

5

Unplanned, New Webinars Added Due to COVID-19 Market transformation efforts were among the most impacted areas of our program, as inperson educational efforts have been critical to achieving our clean energy goals over the last decade. Workshops were quickly switched to online formats for both students and working professionals, and thanks to the flexibility and marketing creativity of Hawai'i Energy's facilitators, many of these workshops resulted in higher attendance than was expected for an in-person session! Some even came up with new, more relevant session topics and

models to help bring efficiency to the forefront of the recovery conversation. Examples include:

- A joint webinar with the Chamber of Commerce, featuring the Hawai'i Senate and House energy committee chairs, county mayors, and the Hawai'i State Energy Office discussing energy efficiency's role in statewide recovery;
- Virtual community "Energy Unplugged" sessions, where participants were incentivized to attend with donations to their group sports teams and clubs;
- The start of an "Ask The Expert" webinar series featuring facility managers from major sectors like hotels

Rooted in Relationships

CLEAN ENERGY ALLY (CEA) PROGRAM

virtual sessions due to COVID-19 increased CEA participati

PY19 STATEWIDE ACHIEVEMENTS

OVERVIEW

285

Number of CEAS

9,700

Number of Projects
CEAS Performed

\$21.65 mil

Total Annual Bill Savings Hawai'i Energy's Clean Energy Ally (CEA) network includes over 250 contractors, equipment suppliers, manufacturers, engineers, consultants, and others who are helping to build our clean energy future all across our service areas. Allies are on the "front lines" of energy efficiency – meeting with local residents and businesses, encouraging them to take advantage of Hawai'i Energy's offers and ultimately ensuring that thousands of homes and businesses can enjoy the benefits of energy-saving technologies. They advocate for sustainability, help us ensure energy-saving tools are made available to all communities, and represent a growing number of green jobs that continue to be an essential piece of Hawai'i's economy.

After several years of wide-reaching acquisition efforts, Hawai'i Energy focused this year on deeper engagement with our active Allies, focusing on a more holistic effort to support them not only through enhanced incentives, but through professional development events, special recognition, and feedback implementation.

- ► Michael Doi, Operations Manager at Finance Factor Center networks with colleagues at the *Building Energy Secrets Lunch & Learn*
- ▼ The CEA kickoff breakfast on July 25, 2019 at the Ala Moana Hotel is always a popular and well attended event





"It was great to see new and familiar faces at our *Building Energy Secrets Lunch & Learn*. The attendees play an important role in setting the tone for energy saving improvements throughout their organization."

— HOANG TRAN,

Energy Advisor at Hawai'i Energy (and presenter at Lunch & Learn)



STRENGTHENING SKILLS

Hawai'i Energy supports Allies by providing tailored training opportunities geared toward current industry trends to further drive our Allies' technical expertise and boost their workforce capacity. We also helped support CEAs in their customer acquisition efforts, bringing CEAs together with potential customers. Despite COVID-19 disrupting many in-person events, including our annual Innovation Symposium, there was a significant increase in participation in virtual events, allowing us to surpass program goals.





HONORING CLEAN ENERGY CHAMPIONS THROUGH THE ENERGY ADVANTAGE INSIDERS REWARDS PROGRAM

348

Projects Completed by Energy Advantage Insider CEAs To honor some of the top performing CEAs for their contributions to Hawai'i's clean energy future, we launched the Energy Advantage Insiders Rewards Program. Contractors who completed 25+ Energy Advantage projects, which help small businesses make energy efficient upgrades at significantly reduced prices, are rewarded with additional spotlight: they appear at the top of the online directory with a special designation next to their name, they are featured in the monthly newsletter, and are invited to special trainings, in addition to other benefits.







"These contractors have such a positive impact on Hawai'i's small businesses and really deserve this recognition. Our program rewards the most active contractors who regularly remove barriers for small businesses to be able to engage in energy efficiency."

— **DESIREE SUMAOANG**,
Business Alliances Advisor at Hawai'i Energy

"Our experience with using the Energy Advantage Rebate Program is that it has really helped out the small business sector and community. We have been able to build good relationships with our customers, and in turn our customers love their new and improved lighting."

— **JOHN REW,**Koo Electric Service

RESPONDING WITH ALOHA DURING COVID-19

Energy efficiency work was deemed an "essential service" across the state, so our focus shifted to supporting our Clean Energy Allies as they continued to work. We encouraged safety measures (particularly for those providing in-home services), provided "best practice" guidance for energy management during facility closures, and offered technical assistance for customers as they managed changes in scheduling, project scopes and staffing.

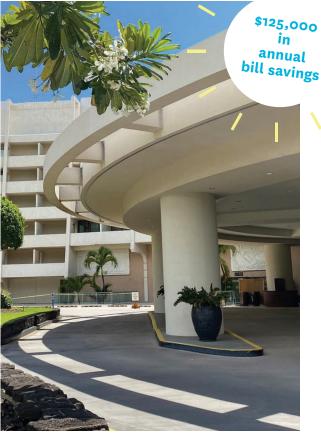
"Thank you for being a great partner in this challenging time. The Hawai'i Energy Advisors have continued to be responsive and engaged." — CEA, from COVID-19 Survey

- When Allies asked for support during COVID-19, we responded by sponsoring a *Selling Energy in a Recession* webinar series by Mark Jewell, which 19 CEAs participated in.
- 61 CEAs participated in the COVID-19 Impact Survey and provided feedback on the impact of COVID-19 on their business as well as how Hawai'i Energy could best support them during such a challenging time. The major themes included the need to help communicate to customers that CEAs were essential and continuing to operate during the pandemic as well as the need to further assist customers financially with energy projects.
- In response to the feedback gained from the CEA COVID-19 Impact Survey, we responded by
 increasing many incentives to make energy efficient projects financially viable for customers; and
 - 2) spreading the word about CEAs operating via the monthly business email newsletter and continuing to connect customers with contractors for their project needs.



Chiller Replacement and Optimization for Sheraton Keauhou executed by EMCC

On Hawai'i Island, Clean Energy Ally EMCC completed a chiller replacement and optimization for Sheraton Keauhou. With energy bill savings of \$125,000 per year and approximately an \$85,000 Hawai'i Energy rebate, the project is expected to pay itself back in 2.1 years. Not only did EMCC help the Sheraton Keauhou see financial benefits, but the new system will be more reliable than the older one and the hotel will be able to provide comfort for guests much more efficiently.





LED Lighting System for ALSCO executed by EOS

The premier laundry processor on the island, ALSCO processes over 100,000 pounds of laundry every day in their 72,000 sq. ft. facility. Originally the fluorescent lighting ALSCO had masked the stains and damages to the linens, making it difficult for employees to pull the poor quality products out of circulation. By designing and implementing an LED lighting system, Clean Energy Ally Energy Optimization Services (EOS) helped ALSCO achieve an 80% reduction in lighting-related energy costs, equaling over \$72,000 in annual bill saving.







"We've had several compliments about how the lighting has re-energized the employees. One of the great advantages is that the new lighting systems are not just more efficient, but they also provide a better, cleaner light, so when we look at our white linens and things like that, we can see the discrepancies, because it's actually a sunlight appearance versus the old fluorescents." — BRIAN ARKLE, General Manager of ALSCO

Moving Forward Together

CLEAN ENERGY TECHNOLOGIES: RESIDENTIAL PROGRAMS

PY19 STATEWIDE ACHIEVEMENTS

OVERVIEW

\$19,850,500

Total Dollars Saved

16,908

Total Residential Rebates

\$7,983,700

Total Value of Residential Rebates Given In PY19, Hawai'i Energy focused on a strategic transition towards a comprehensive residential energy services program, with the goal of helping as many island families and residents as possible make smart energy choices. Key initiatives included expanding and leveraging existing programs by introducing new supply channel (manufacturers, distributors, contractors, retailers) partnerships, increasing access to energy-efficient technologies, and streamlining the incentive process. Hawai'i Energy also focused on improving the residential customer experience, all while remaining agile and demonstrating a swift ability to pivot in challenging times and respond to changing needs of the community.

Overall, our comprehensive residential program helped support the clean energy landscape in Hawai'i and create more resilient local homes by advancing new state residential energy codes and standards, increasing targeted energy efficiency measures, and increasing the rate of adoption of new clean energy technologies.

Mililani resident and long time friend of Hawai'i Energy Randy Iwase "recognized the importance of having a solar water heating system for our home to keep our monthly electricity costs down. We recently replaced our aging solar heating system and are grateful for and took advantage of the Hawai'i Energy rebate. The rebate reduced our out of pocket expense and made the replacement all the more affordable."





"It's a great thing to have energy efficient appliances in my home. Especially now, because of COVID-19, we're going to be home a lot more. Also my son who's still in high school will be doing distance learning for the whole year so having appliances that are efficient really helps us to cut back on our energy usage in other ways. So I'm glad I don't have to worry as much about my energy bill."

— SHANNON CHOW,

in her new self-built Habitat for Humanity home



EXPANSION AND LEVERAGE OF EXISTING PROGRAMS

Hawai'i Energy invests heavily in making sure that customer contributions to the Public Benefits Fund are distributed back to the widest number of eligible residents possible. With limited funding each year, a large part of designing rebate offers is making sure they align with market trends to ensure that financial assistance is provided where it's needed most.

When a government shutdown caused brands to stop pushing for ENERGY STAR® certifications, we responded to the shift in the market by directing rebate funding toward other energy-saving products like specialty and smart lighting, and heightening our focus on maintenance services for solar water heaters and air conditioners to make sure they were operating properly and efficiently. At the same time, we worked on reaching additional customers both by introducing new supply channels and removing barriers to entry for other programs.

Innovative Purchasing at Habitat for Humanity ReStore



Hawai'i Energy leveraged previous commercial projects with the *Habitat for Humanity*'s *ReStore* to launch a new program for residential refrigerators. Habitat *ReStores* are independently owned reuse stores operated by local *Habitat for Humanity* organizations that accept donations and sell new and used home improvement items to the public at a fraction of the retail price. By coordinating a separate recycling process with the recycler instead of directly through the retailer, Hawai'i Energy enabled customers of *ReStore* to participate in the Refrigerator Trade-Up program and receive a \$150 rebate by purchasing a qualifying ENERGY STAR® certified refrigerator. By expanding this program to reach additional customers, Hawai'i Energy helped recycle 250 additional refrigerators.

Rid-A-Fridge Program on Hawai'i Island

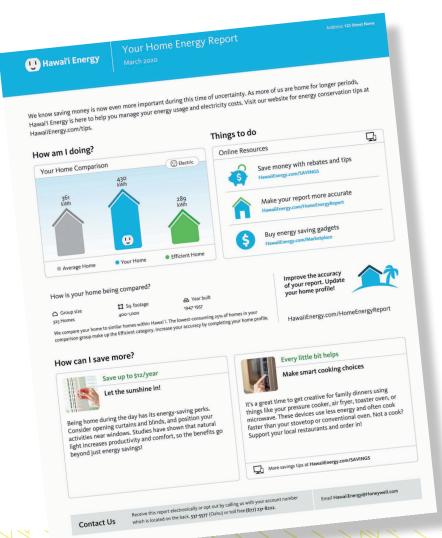
In order to participate in our Rid-A-Fridge program on the island of Hawai'i, customers previously had to haul their own appliance directly to Big Island Scrap Metal and pay a \$55 fee to drop off. Unlike the other islands, there was no available transportation company that was available to pick up and deliver old refrigerators or freezers. To address the financial barrier, Hawai'i Energy signed an agreement with Big Island Scrap Metal allowing the program to directly reimburse the recycler to eliminate customer out-of-pocket costs. This will help expand Rid-A-Fridge participation on the island of Hawai'i.







IMPROVING THE CUSTOMER EXPERIENCE WITH HOME ENERGY REPORTS



270,000

Homes That Received Home Energy Report 10,983,400

Estimated Total kWh Saved from Home Energy Reports PY19

Our Home Energy Reports are often one of the first ways a residential customer might learn about energy conservation and the Hawai'i Energy program. This year, taking into account the feedback we've received on reports, we sought and implemented new features to the Reports with the goal to improve customer experience. Bill disaggregation charts, which used intelligence to estimate what customers' energy use was attributed to, had resulted in more questions around the reliability of the report than actual engagement, so we opted to remove these from the Report as well as launch a new and robust Home Energy Report landing page and cohesive FAQ page on our website to empower customers to learn more about the Report on their own.

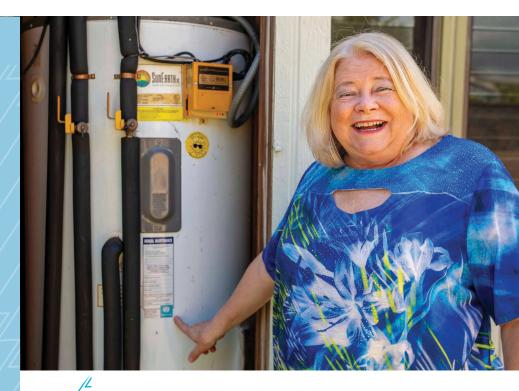
Overall, the changing of messaging to improve the customer experience led to a more positive perception of the program as well as more engaged customers who were less concerned with the accuracy of the report. This resulted in a more productive call center that could focus on customers with genuine interest in lowering their energy use.

RESPONDING WITH ALOHA DURING COVID-19

With the stay-at-home order from the COVID-19 pandemic leading to economic downturn in addition to increased residential electric bills, Hawai'i Energy increased and extended many existing incentives in addition to adding new ones to help put more money into customers' hands. The program also shifted overall towards increasing energy efficiency education in the form of low and no-cost tips and kids' activity packs.

- Among new incentives in response to marketplace needs were air purifiers, which were in higher demand during the stay-at-home order. The promotion sold 285 units that were shipped directly to customers' homes.
- A \$5 Home Efficiency Kit promotion, which included \$40 worth of energy efficient products that would save up to \$300 on electricity bills annually, was extended due to increased demand.

 Over 2,600 kits were purchased along with over 1,800 advanced power strips.
- The call center reported an increase in customer engagement with the Home Energy Reports and more callers inquiring about proactively adjusting their energy use in response to their added "work from home" demand.
- Marketing and communications efforts were amped up to ensure customers had tools and information in order to anticipate climbing electricity bills. Website traffic jumped 70% from April June, with most visitors exploring our customized "Saving Energy While Working From Home" tip sheet and lists of available rebates.



"I'm happy that I can save some money by participating, but I also feel it's just the right thing to do to take care of our planet. Hawai'i Energy makes it simple and convenient to do both. Our family has received several different rebates from Hawai'i Energy over the years, and each time the process has been great."

— BECKY GUSTAFSON,

Mililani resident, and owner of new solar water heater and solar attic fan

Moving Forward Together

CLEAN ENERGY TECHNOLOGIES: BUSINESS PROGRAMS

PY19 STATEWIDE ACHIEVEMENTS

1,042

Business Participation

1,936

Total Rebates Given to Businesses

\$ 9,648,387

Total Value of Rebates Given

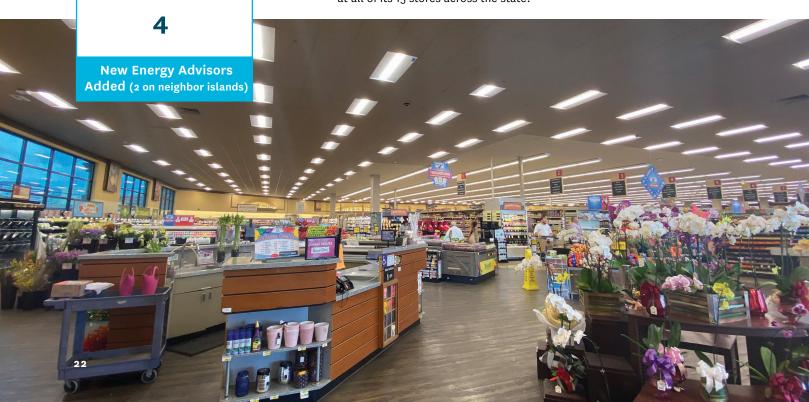
OVERVIEW

To administer programs targeted towards business customers, Hawai'i Energy has a team of experienced Energy Advisors to provide technical assistance and help customers navigate the rebate process. Each sector has a dedicated Energy Advisor to assist with questions pertaining to the specific sector, and informing them of relevant rebates which will alleviate some of the upfront costs of energy projects, creating pathways for customers to see projects through to completion.

The program provides resources to customers beyond financial incentives, such as our Clean Energy Ally network, and training opportunities and webinars, to address their unique barriers to see deeper energy savings.

As the business program evolves, we aim to target specific customers to meet market needs for specific equipment types, put more emphasis on targeting customers directly to further eliminate barriers, and helping them get leadership buy-in.

▼ Below: the 63,900 sq foot **Safeway** at Beretania Street in Honolulu. Grocery stores often have some of the smallest profit margins, so investments in energy efficiency are often high-stakes decisions. For national chain stores, however, corporate sustainability mandates can influence projects locally. This year, Hawai'i Energy was pleased to continue its collaboration with Albertsons Companies (owners of Safeway stores) to provide rebates for LED lighting retrofits at all of its 15 stores across the state.





OVERCOMING CHALLENGES IN THE RESTAURANT SECTOR

Given the expensive nature of owning and operating a restaurant, owners often have minimal capital to invest in energy efficiency measures. This program year, we focused efforts on driving interest in ENERGY STAR® appliances, aiming to add to the benefits that many restaurants have already seen by receiving lighting retrofits through Energy Advantage. We doubled our commercial kitchen incentive, and expanded education on energy and non-energy benefits of ENERGY STAR® kitchen equipment. Oftentimes restaurants will purchase less efficient, second hand equipment to save on upfront costs, so with this incentive we aimed to steer customers away from this and make the choice that would save them money in the long run. We saw an increase in participation due to this initiative and decided to extend it into PY20 to allow additional customers to participate in the doubled rebate offer.



At the grand opening of Wendy's Nānākuli in December of 2019. "Lowering our carbon footprint and lowering costs is essential to our future."

JIMMY GOODWYN, Franchise Owner of Wendy's



HOLISTIC APPROACH TO OFFICE BUILDINGS

"We are very pleased with our Hawaiii **Energy Audit experience! Experts from** Ameresco did a tremendous amount of work — installed monitoring devices to understand our energy utilization, conducted interviews with our staff, and collected billing information. We're now more aware of the energy savings opportunities. We've always strived to be a good steward of our environment for the current and future generations. This engagement with Hawai'i Energy and Ameresco has really helped us to further our progress in achieving those goals."

— DAVID CHANG,

Director, First Presbyterian Church of Honolulu (Audit committed to in PY19 and completed in Aug 2020)

free energy audits include a 10% bonus discount to execute

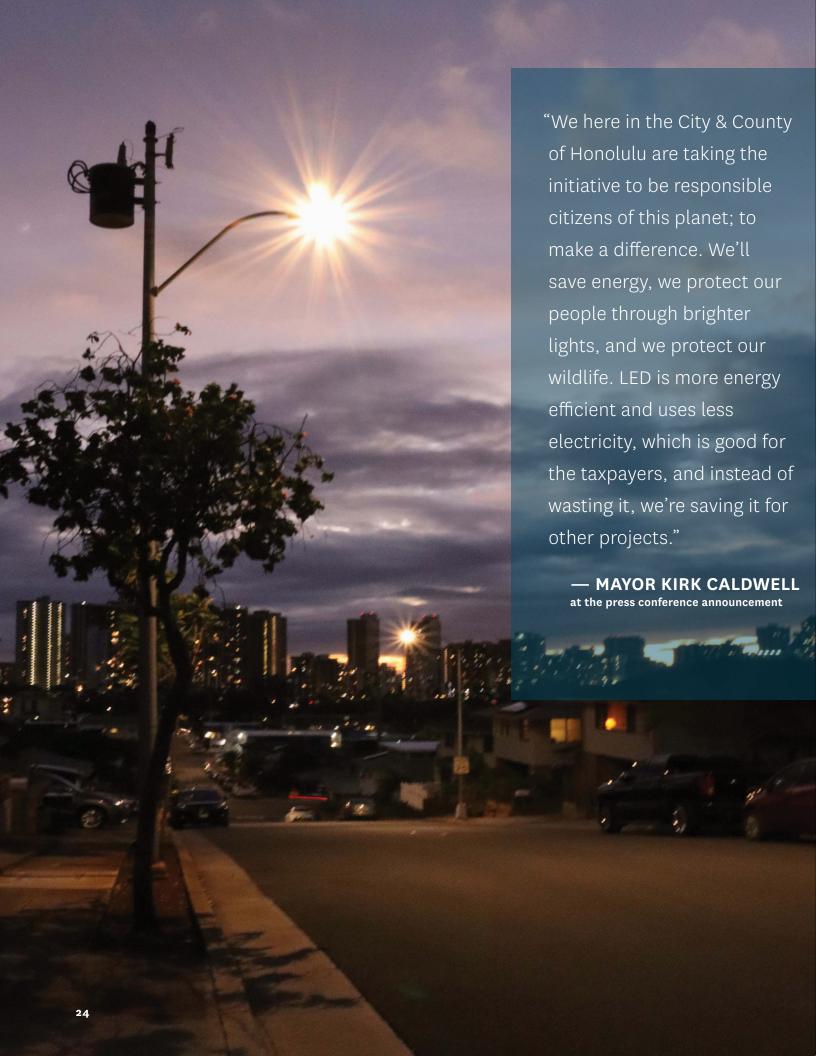
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Energy Audits Committed

Office buildings are high energy users and energy audits are an important tool to pinpoint specific areas of inefficiency Audits, however, are often expensive and not

normally included in annual budgets, and results can be overwhelming and sometimes paralyzing for a building manager. To encourage action with efficiency, Hawai'i Energy provided a number of free audits, a 10% bonus incentive for any projects as a result of the audit, and connected customers directly with Energy Advisors and Clean Energy Allies to help them.

The good progress we were making on completing audits was stopped short because of COVID-19. In PY19, a total of 30 customers signed up for free energy audits. 8 audits were completed in PY19 and were a mix of standard audits and the free ones offered through our audits promotion. As of this writing, over 25 energy audits are queued up for PY20, the majority of which are ones committed in PY19. We'd love to see at least 50% of the participants implement at least one or two energy efficiency measures within 1 to 1.5 years of the audit's completion date.





LED STREET LIGHT CONVERSION ACROSS HONOLULU

\$2,200,000

5.3 tons

Annual Bill Savings

CO2 Avoided

\$870,200

7.5 mil

Upfront Rebate Savings

kWh Saved

When the City & County of Honolulu was orchestrating their massive Oʻahu LED street light conversion project, they turned to many entities for input. In addition to working with performance contractor Johnson Controls and gathering public input through pilot rounds and public meetings, Hawaiʻi Energy provided advice on bulb technology, cost savings and potential rebates.

In total, the City upgraded nearly 53,000 public lights, resulting in a 60% reduction in energy usage and annual savings of \$5 million dollars that can be allocated elsewhere for much-needed City services. Along with paying a lower electricity bill, additional taxpayer savings will come from maintenance costs as the new bulbs will last 10x longer, reduce the need for replacement equipment over time, and hopefully ensure better visibility for drivers.



All Smiles. L to R: Executive Director **Brian Kealoha** with **Brandon Elefante** (City Council, District 8), **Joshua Stanbro** (Chief Resilience Officer, Honolulu Office of Climate Change, Sustainability, and Resiliency), Honolulu **Mayor Kirk Caldwell,** and members of the City & County and Hawai'i Energy teams to celebrate the City's rebate for its LED streetlight project.

RESPONDING WITH ALOHA DURING COVID-19

Business owners' prime concerns pivoted to keeping patrons safe, retaining employees, and most of all: keeping doors open. Owners and managers were faced with tough calls this year. Choosing energy efficiency projects during this time became a lower priority for many businesses.

To respond to the community:

- We doubled-down on customer engagement, making sure to stay in touch with customers throughout the period
- Many of our programs switched to virtual/video inspections due to elimination of in-person inspections
- We assembled and distributed "Best Practice" guides for the top and most visible industries office buildings, grocery stores, healthcare, and food and beverage as a resource to our customers
- We shared helpful business re-opening tips focused on HVAC and air quality to ensure building safety

 HAWAI'I ENERGY Annual Report 2019

Eyes Toward the Future

INNOVATIVE TECHNOLOGIES AND RESEARCH

OVERVIEW

Committed to the progression of grid service capable technologies, Hawai'i Energy focused on exploring emerging technologies advanced enough to adapt to future utility programs and optimize customer savings, while minimizing negative impact to the grid. We continued to develop programs to support the integration of

traditional efficiency with technologies that provide energy optimization and grid services to better position ourselves to meet the evolving needs of the grid in the future. Overall, our research and innovation helped set the groundwork for upcoming program years by identifying, evaluating, convening and piloting new emerging clean energy technologies and services to fill the pipeline of future rebates that best will help Hawai'i reach a 100% clean energy future.



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ELECTRIFICATION OF TRANSPORTATION

Hawai'i Energy leveraged partnerships and funding resources to launch Electric Vehicle Charging Station (EVCS) incentive programs in PY19 to support Hawai'i's EV charging infrastructure by addressing a major pain point in the transition to clean energy transportation across the islands. Following a successful pilot program with Ulupono Initiative, Hawai'i Energy relaunched the EVCS program utilizing \$400,000 in funding appropriated by the Legislature and signed by the Governor through Act 141, leveraging funding beyond just ratepayer dollars to have a bigger impact. \$55,000 of state-funded incentives were paid out by the end of PY19 to install a total of 18 charging stations.





GRID SERVICES AND DEMAND RESPONSE

New and renewable sources of energy, such as solar, are generated during the day when people are not using as much electricity (for example: turning on the lights which happens more frequently at night). In order to make the most of these clean energy resources, we look to innovative technologies to provide flexibility in how electricity is being used. Often these technologies help shift demand from the evening to the daytime.

Smart Water Heaters with Shifted Energy

Partnering with Shifted Energy, Hawai'i Energy was able to reach residents in low-income and multifamily high-rises who wouldn't normally

1,004

Interactive Devices
Installed

be able to participate in the standard solar water heating program. Through the program, Hawai'i Energy incentivized 1,004 grid interactive water heaters controllers, which shift the time of day that the water heater heats up, providing a unique opportunity to receive an annual bill credit of \$30-\$60 from HECO while be also participating in Hawai'i's clean energy future. Residents were appreciative of the bill credit saying, "Every little bit helps."



M. Watanabe electrician in Hauʻula installing *Shifted Energy*'s Tempo device on a home's water heater

"Partnering with Hawai'i Energy to provide more impact to Hawaiian Electric utility customers has been a great challenge. As we learn more, we grow as individual companies and as partners. I can't wait to see what more we can accomplish together."

— **FOREST FRIZELL,** CEO of Shifted Energy

Smart Thermostats with GridPoint



Hawai'i Energy began a pilot program with GridPoint incentivizing GridPoint's smart thermostats in fast food restaurants, signifying our first smart thermostat incentive for the commercial sector. Along with the smart thermostats, GridPoint also installed devices with temperature sensors to help monitor other cooling equipment such as refrigerators and freezers. Since restaurants are often so busy serving customers around the clock, they benefit from receiving a friendly reminder to close their freezer door if it's open a little too long. Having completed installations in three restaurants so far, Hawai'i Energy has not only helped those restaurants save energy, but has also paved the way for additional incentives in demand response and real time energy management (RTEM).



INNOVATION HUB VISIONING WITH ELEMENTAL EXCELERATOR

In PY19 Hawai'i Energy focused on the exploration of emerging tech and building out what a future program might look like. A large effort was placed on relationship building and strategic planning with *Elemental Excelerator* to leverage their successful evaluation process and help us identify startup companies that align with our clean energy goals. This framework for collaboration has already highlighted a few emerging technologies and services that we will move forward with to incentivize and fill the pipeline for future Hawai'i Energy offers.

"Elemental Excelerator and Hawai'i Energy have a long history of collaboration. We're excited to continue working together to deepen Hawai'i Energy's footprint in the innovation ecosystem. This partnership will extend recruiting in areas of particular focus to Hawai'i Energy and help find technologies that serve communities most vulnerable to climate change."

— **TIFFANY HUYNH,** Director of External Affairs at *Elemental Excelerator*

Driving Change

CLEAN ENERGY POLICY

Changing consumer behaviors often needs an extra push from legislation. Hawai'i Energy is a resource for legislators when they are drafting a bill and provides insight and testimonials on efficiency measures. It's important that our lawmakers are knowledgeable of the technologies they're addressing in the bill and have an understanding of how it affects the public.

In order to drive change and be a part of the discussion at the State level, our program has strengthened its relationships with key legislators, like Representative **Nicole Lowen**, the Chair of the Energy & Environmental Protection Committee and Senator **Glenn Wakai**, the Chair of the Energy, Economic Development and Tourism Committee, by frequently outreaching to them, and asserting ourselves as industry experts. We've also continued collaborative efforts with industry organizations, including Blue Planet Foundation, Hawaiian Electric, and the Hawaii State Energy Office to drive our efforts to reduce energy usage in the islands.



BILL 25, PASSED

Bill 25 for the City and County of Honolulu enforces the new energy codes for builders and developers, raising the energy efficiency standard for new buildings. Building codes are necessary to making sure developers are choosing sustainable options and it's far cheaper to install energy efficient measures when the building is being built, rather than retrofitting in the future. This action saves tenants money on their electricity bills.

Hawai'i Energy worked closely with the City and County of Honolulu's Office of Climate Change, Sustainability & Resiliency as well as developers to create a bonus incentive exclusively for affordable housing developments, designed to cover the full cost of the EV charging station installations. Since revisions of the bill ended up not requiring stations or EV-readiness at affordable housing developments, this bonus incentivizes them to give their residents access to charging stations.

"How we build will determine how resilient and safe we are in the face of the climate crisis. We can produce more jobs, savings in resident pockets, and a cleaner future if we continue to work together and build a green economy through advances like Bill 25."

— **JOSHUA STANBRO,** Chief Resilience Officer, Honolulu Office of Climate Change, Sustainability, and Resiliency



ACT 141 (2019)

Act 141 sets a minimum efficiency standard on specific types of appliances sold within the state and prevents manufacturers from selling inefficient appliances to our residents. New legislation was introduced in 2020 to cover additional appliances, to further encourage efficient appliance adoption. Although this bill wasn't passed, it's started the conversation to improve appliance standards on more appliances.

"HB 556, which was signed into law as Act 141 of 2019, established energy and water efficiency standards for certain household appliances. This bill was introduced because we saw it as a common-sense, no-cost measure that would benefit consumers and further our clean energy goals at the same time. With Hawai'i's highest-in-the-nation cost of electricity, this legislation is especially impactful, and will save residents and businesses millions of dollars. Hawai'i Energy was instrumental in helping us craft this legislation and brought to the table valuable expertise in energy efficiency policy."



- REPRESENTATIVE NICOLE LOWEN, District 6: Kailua-Kona, Holualoa, Kalaoa

HB 1846

Hawai'i Energy provided support and testimony in support of HB 1846 which mandated all state facilities over the size of 10,000 square feet to implement energy efficiency measures. Status of the bill was still pending at the end of PY19 due to the extended legislative session as a result of COVID-19.



Signing Act 141 (2019) into Law. Executive Director Brian Kealoha with

Mary Alice Evans, Director at the State of Hawai'i Office of Planning; Mike

McCartney, Director of the Department of Business, Economic Development
and Tourism (DBEDT); Leodoloff Asuncion, Commissioner, Hawai'i Public

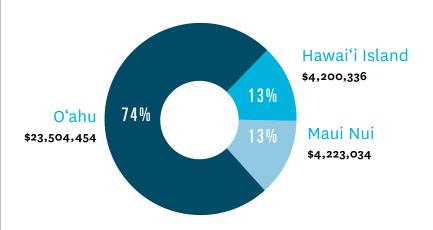
Utilities Commission, Governor David Ige, James Griffin, Chair, Hawai'i Public

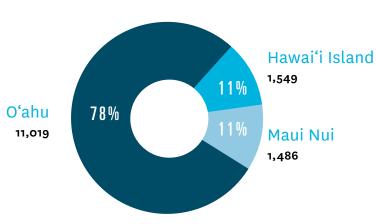
Utilities Commission

Hawai'i Energy PY19 Financials

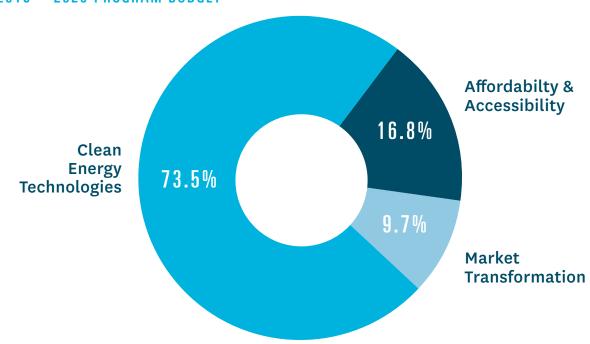


PARTICIPATION WITH HAWAI'I ENERGY PROGRAMS





2019 - 2020 PROGRAM BUDGET



TOTAL DOLLARS SPENT: \$ 29,224,627

