

2014 Corporate Sustainability Report



Hawaiian Electric
Maui Electric
Hawai'i Electric Light



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Editor's note: At the Hawaiian Electric Companies, we recognize the use of diacritical marks in the modern Hawaiian language and make every effort to include such marks in Hawaiian names. Out of respect for individuals and organizations that do not use diacritical marks in the official spelling of their names, we are not including diacritical marks in those instances.



Welcome to the Hawaiian Electric Companies' seventh annual Corporate Sustainability Report.

As the impacts of climate change are felt globally, we here in Hawai'i need to develop more sustainable solutions for our communities. Our vision: A more affordable clean energy future that will create meaningful benefits for Hawai'i's economy and our island environment.

To that end, we're making steady progress on our clean energy goals and are challenging ourselves to meet more aggressive renewable energy requirements. We're also modernizing our electric grid with smart grid technology, enabling us to improve integration of low-cost renewable energy, improve grid reliability and provide more products and services to our customers.

As the energy environment evolves, we're committed to being even more responsive to our customers' needs. Our companies continue to lead the nation in rooftop solar photovoltaic (PV) and are working on innovative solutions to enable us to safely integrate even higher levels of distributed generation onto our electric grids.

With change and new challenges comes an opportunity to learn and improve. There is a lot of tough work ahead of us. Transforming to deliver on our ambitious energy plans requires collaboration among our employees, policymakers, customers and communities, as we work together to achieve the clean energy future we all want for Hawai'i.

We appreciate this opportunity to share with you the efforts and progress we're making in renewable energy, in environmental stewardship, and in sustaining and strengthening the relationships we have with our communities and customers. We value the input from all of our stakeholders and know that, through these ongoing conversations, we'll continue moving forward so that future generations will benefit.

Aloha,

A handwritten signature in black ink, appearing to read 'Alan Oshima'.

Alan Oshima
President & Chief Executive Officer

A photograph of two men wearing white hard hats and safety glasses, looking out over a vast solar farm. The man in the foreground is wearing a black shirt and has his hand on his forehead, while the man behind him is wearing a blue shirt. They are standing on a metal structure, possibly a walkway or part of the solar farm infrastructure. In the background, there are rows of solar panels, a large cylindrical storage tank, and a white truck. The landscape is arid with mountains in the distance under a clear blue sky.

A Transformational Vision for Our Energy Future

In 2014, our companies set out on a transformational path. Responding to a changing energy landscape and customer needs, we revisited long-range planning goals and developed new energy plans.

Through this process, we set ambitious goals to achieve by 2030:

- Lower electric bills 20 percent and offer more service options
- Nearly triple the amount of distributed solar generation
- Achieve 65 percent renewable energy, exceeding the 40 percent Renewable Portfolio Standard

Meeting these goals will require a transformation of our existing electric grid and significant investment by our companies. As we refine our plans further, we'll continue to engage our stakeholders and communities for collaborative input.

Generation Activities

In 2014, 21 percent of the electricity used by our customers came from renewable energy sources, including biomass, geothermal, solar, hydro, wind, and biofuels. More clean energy projects on O‘ahu are in development, in negotiation, or in the process of regulatory review:

- The Hawai‘i Department of Transportation is constructing a 10-megawatt (MW) biofuel generating station at the Honolulu International Airport.
- We are working with the Army on the development of a 50-MW alternative fuel generating station at Schofield Barracks.
- We are seeking permission from the Hawai‘i Public Utilities Commission (PUC) to pursue eight more solar projects with a combined capacity of 240 MW.

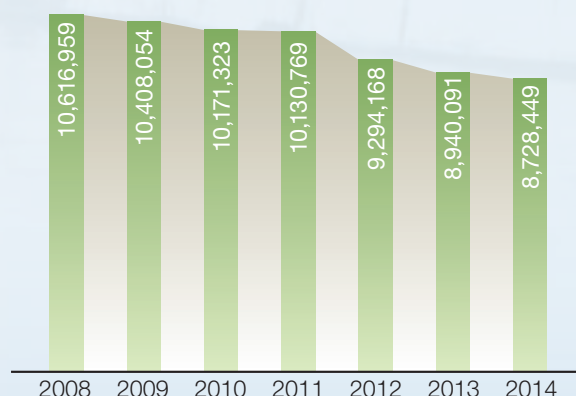
Deactivating Power Plants

The increased amount of renewable energy for generation and more efficient and declining electricity use by customers have enabled the deactivation of older, oil-fired generating units. These deactivated plants will no longer be in operation, but have the ability to be restarted in the event of an emergency.

- We deactivated our oil-fired Honolulu Power Plant in January 2014—nearly 125 years after the generating stations first started providing electricity to the people of O‘ahu.
- Two of four units at Kahului Power Plant on Maui were also deactivated in 2014.

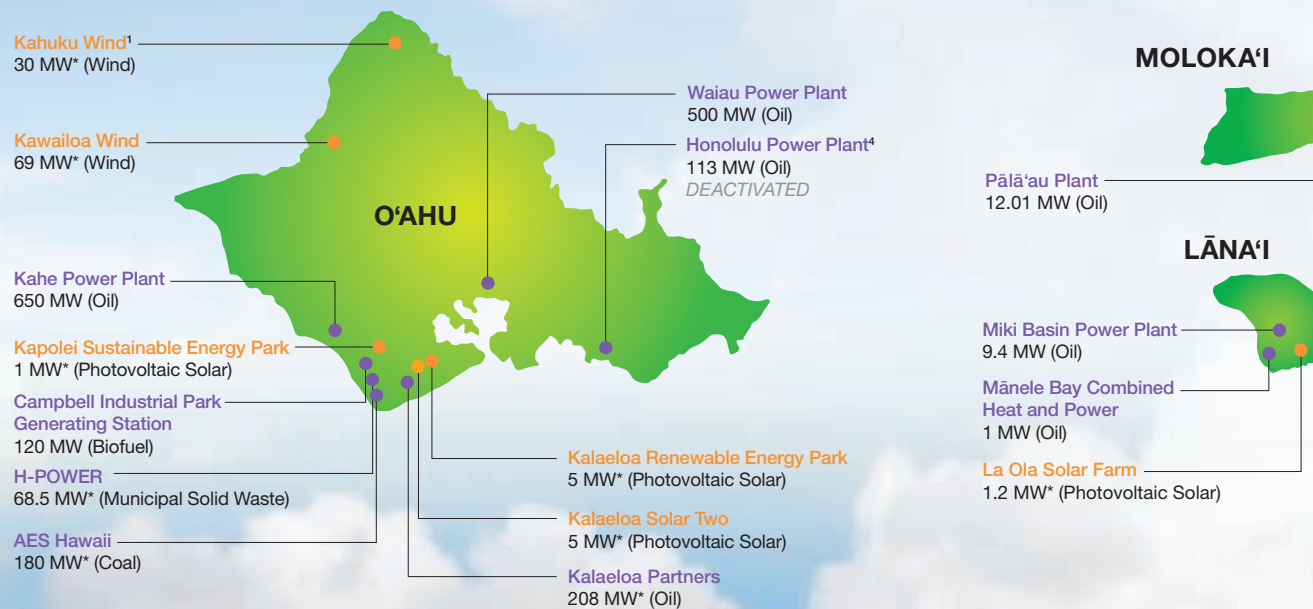
Our power supply improvement plans also call for the deactivation of additional generating units in the years ahead. This is a positive sign of our progress in reducing our dependence on imported oil.

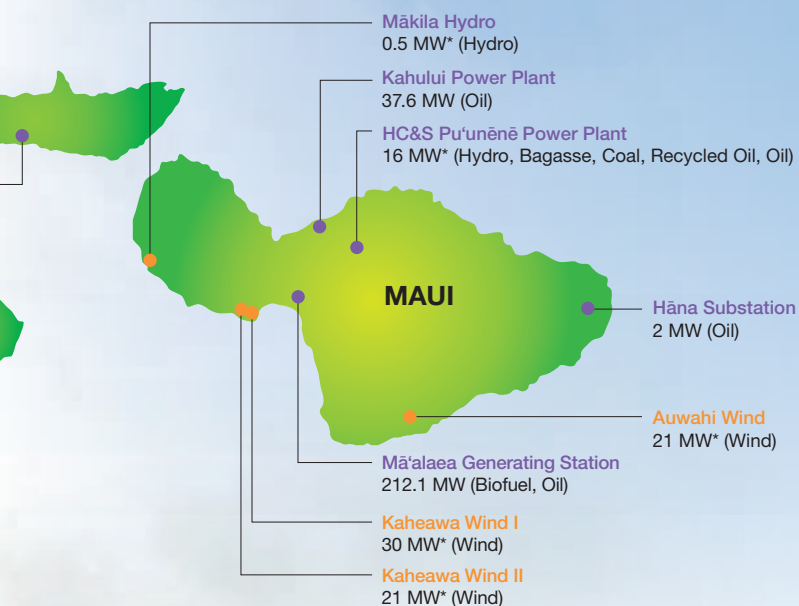
Barrels of Oil Used for Electricity



Reducing Hawai‘i’s dependence on imported oil is a critical step to energy security for Hawai‘i. In 2014, more than 211,000 fewer barrels of oil were used to generate electricity, compared to the year before. Our companies have continued this positive trend, reducing the use of imported oil by more than 17 percent from 2008 to 2014.

Generating Capacity





Hamakua Energy Partners
60 MW* (Oil)

Hawi Renewable Development
10.56 MW* (Wind)

Waimea Plant
8.25 MW* (Oil)

Keāhole Power Plant
80.55 MW (Oil)

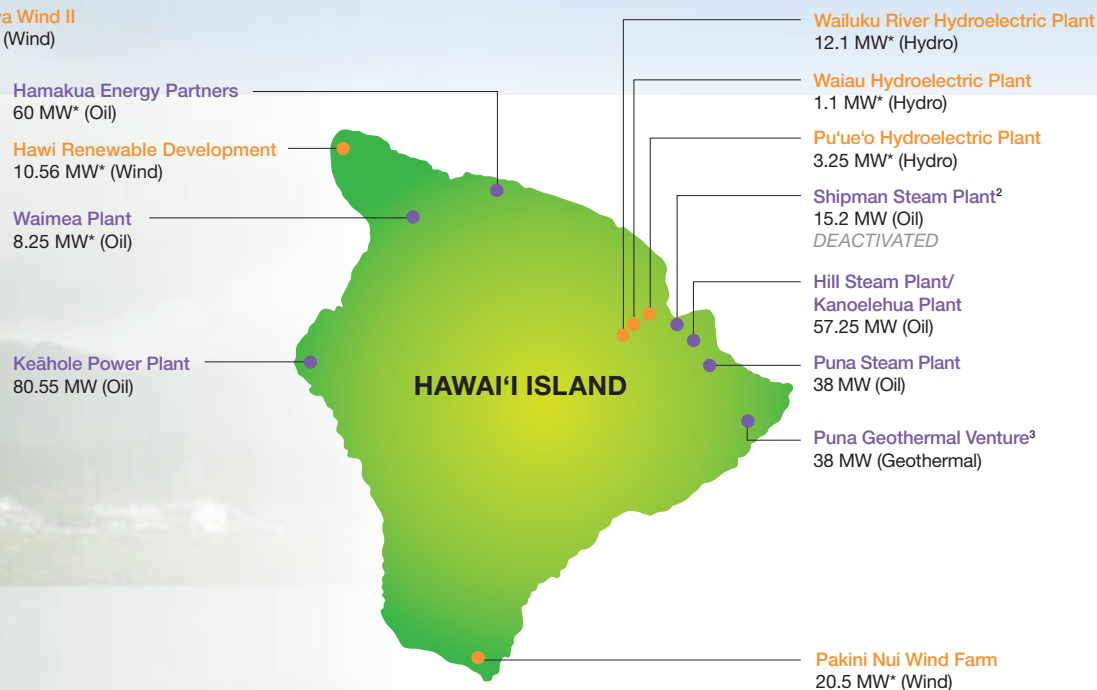
Generating facilities with maximum capacity (in MW) in the Hawaiian Electric Companies' service area.

● **Firm Generation:** Electricity from a source that is available and controllable on demand, whenever needed. Steam or combustion generation fueled by biofuels, biomass, municipal or agricultural waste, geothermal, or fossil fuels are examples of firm generation.

● **Variable (or As-Available) Generation:** Electricity from a source not available or controllable at all times. Examples include solar, wind, and run-of-the-river hydro, as they provide power only when the sun shines, wind blows, or streams run strong.

*Net generating capacity

1. Kahuku Wind returned to full service in February 2014.
2. Shipman Steam Plant was deactivated in 2012.
3. Puna Geothermal Venture's contract is 38 MW, but output cannot exceed the maximum demonstrated value, currently 34.6 MW.
4. Honolulu Power Plant was deactivated at the end of January 2014.



Renewable Portfolio Standard

Our companies continue to make progress toward the consolidated Renewable Portfolio Standard (RPS) requirements.

- In 2014, 38.6 percent of total sales (from all three companies combined) came from renewable energy sources and electrical energy savings from energy efficiency and solar water heating technologies—an increase of more than 4 percent from 2013.
- 2014 marked the final year that savings from energy efficiency and solar water heating technologies were included in RPS calculations. When these are excluded, our consolidated renewable generation RPS of 21.3 percent was well ahead of the 2015 goal—and an increase of more than 3 percent from the previous year.

Required Renewable Portfolio Standard

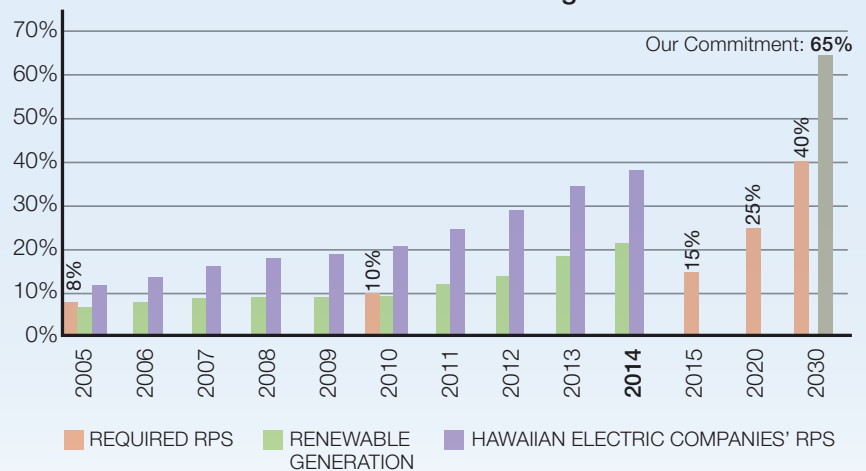
YEAR	REQUIRED RPS	RENEWABLE GENERATION*	HAWAIIAN ELECTRIC COMPANIES' RPS**
2005	8%	6.7%	11.7%
2006	—	8.2%	13.8%
2007	—	9.1%	16.1%
2008	—	9.4%	18.0%
2009	—	9.5%	19.0%
2010	10%	9.5%	20.7%
2011	—	12.0%	24.5%
2012	—	13.9%	28.7%
2013	—	18.2%	34.4%
2014	—	21.3%	38.6%
2015	15%	Starting in 2015, energy efficiency and solar water heating benefits will no longer be included in RPS.	
2020	25%		
2030	40%		

*These percentages include contributions from wind, solid waste, geothermal, biomass, hydro, solar, and biofuel power facilities, plus customer-sited, grid-connected renewable energy generation, required to be calculated starting in 2015 per RPS law, effective July 1, 2009.

**These percentages include, in addition to the above-mentioned contributions, the energy efficiency savings from solar water heating and energy efficiency technologies that may be used to calculate RPS percentages through 2014.

We have reaffirmed our commitment to reduce our dependence on fossil fuels and create a more secure energy future for Hawai'i by raising the 2030 goal of 40 percent of energy generation from renewables to 65 percent.

Renewable Portfolio Standard Progress Over Time

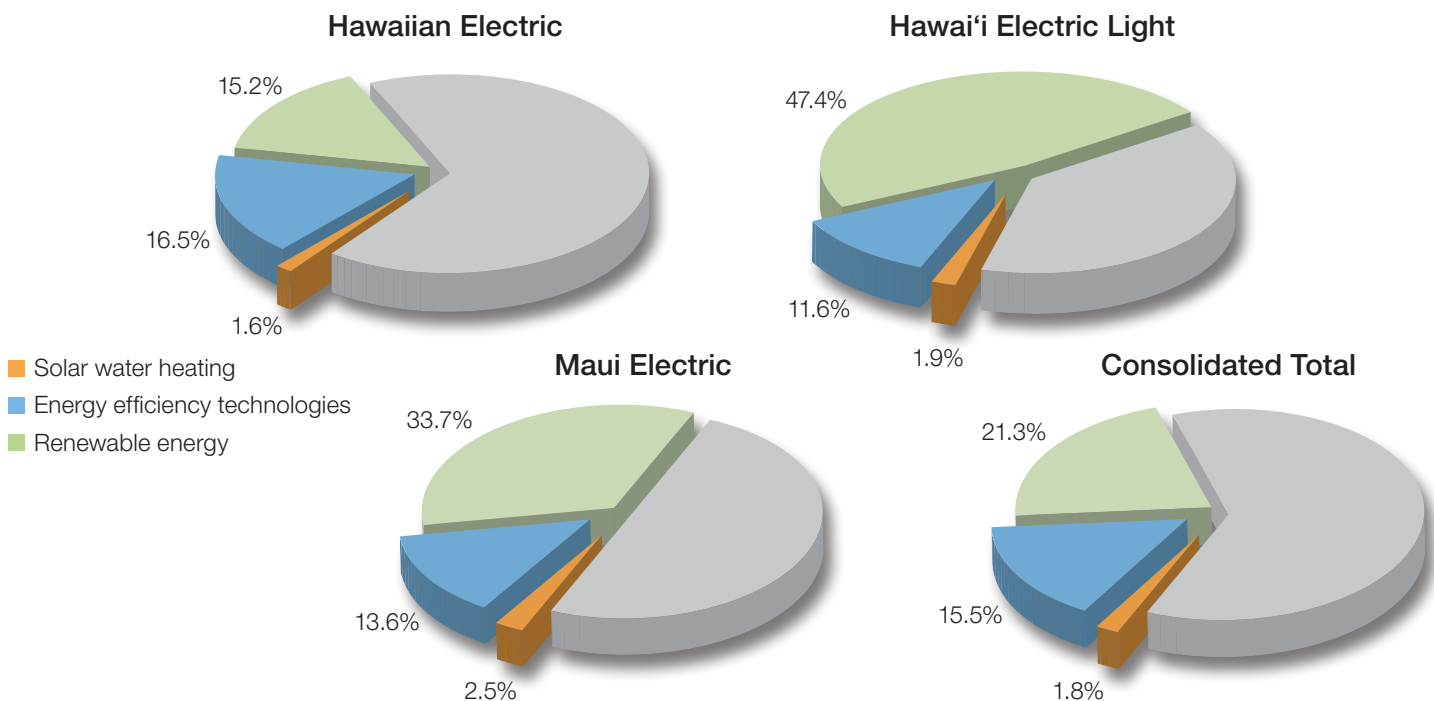


2014 Renewable Portfolio Standard Status Report

For the Year Ended Dec. 31, 2014
(In Net Megawatt Hours)

	2014				2013
	Hawaiian Electric	Hawai'i Electric Light	Maui Electric	TOTAL	TOTAL
Electrical Energy Generated Using Renewable Energy Sources					
Biomass (including municipal solid waste)	390,011	0	43,153	433,164	415,691
Geothermal	0	255,027	0	255,027	281,417
Photovoltaic and Solar Thermal	37,363	1,568	5,324	44,255	33,924
Hydro	0	43,005	8,150	51,155	40,155
Wind	183,864	136,096	257,907	577,868	503,548
Biofuels	36,175	0	918	37,093	29,788
Subtotal	647,413	435,696	315,452	1,398,561	1,304,525
Electrical Energy Savings Using Renewable Displacement Technologies					
Customer-Sited, Grid-Connected	381,657	67,444	65,899	514,999	343,926
Solar Water Heating					
Utility	86,719	15,317	24,216	126,251	144,449
Public Benefits Fee Administrator (PBFA)	24,915	5,081	4,102	34,098	29,733
Subtotal	493,291	87,841	94,217	675,349	518,108
Electrical Energy Savings Using Energy Efficiency Technologies					
Pre-2014 Participants					
Utility	604,619	42,076	80,387	727,082	762,617
PBFA	408,471	66,693	59,362	534,526	407,147
2014 Participants (PBFA)	104,027	14,301	14,467	132,795	127,799
Subtotal	1,117,117	123,070	154,216	1,394,403	1,297,564
TOTAL	2,257,821	646,607	563,885	3,468,313	3,120,196
TOTAL SALES	6,781,665	1,062,521	1,132,056	8,976,242	9,069,512
RPS PERCENTAGE	33.3%	60.9%	49.8%	38.6%	34.4%
RENEWABLE GENERATION RPS PERCENTAGE (Not Counting Energy Efficiency and Solar Water Heating)					
Energy	1,029,070	503,140	381,351	1,913,561	1,648,451
Percentage	15.2%	47.4%	33.7%	21.3%	18.2%

The full RPS report provided to the Hawai'i PUC is available online at www.hawaiianelectric.com/heco/Clean-Energy.



Clean Energy Updates

In 2014, we filed with the Hawai'i PUC several energy plans that lay out our approach to aggressively lower energy costs, proactively respond to emerging renewable energy integration challenges, improve the interconnection process for customer-sited solar systems, and embrace customer "demand response" programs. With more low-cost and cleaner energy sources, additional energy saving options for customers and revised rate designs, we expect to cut average residential customer monthly bills 20 percent by 2030.

WIND

Wind continues to be a valuable source of energy to our islands. In 2014, 41 percent of the total electrical energy generated from renewable sources was attributed to wind. Our companies continue to seek out new projects, technology, and partnerships that will help us incorporate more wind energy onto our electric grids.

Na Pua Makani Wind Farm Underway

At Hawaiian Electric, we signed a 20-year power purchase agreement with Champlin/GEI Wind Holdings LLC to purchase power from its 24-MW Na Pua Makani wind farm, planned for Kahuku on O'ahu's North Shore. The project was approved by the Hawai'i PUC and is awaiting completion of an interconnection requirements study.

Kahuku Wind Returned to Full Capacity

In 2014, the Kahuku Wind Farm, which had been out of service due to a battery fire in 2012, returned to full capacity. After running extensive tests on a new "dynamic volt-amp reactive" device, which regulates fluctuations in voltage, First Wind and our Hawaiian Electric engineers determined the facility could safely increase output to 30 MW.

CLEANER FUELS

We are incorporating a variety of fuels in our fuel mix that are cleaner and meet stricter Environmental Protection Agency air regulations. These include ultra-low sulfur diesel, biodiesel, biodiesel blends, and liquefied natural gas (LNG).

Biodiesel Sourced from Waste Cooking Oil and Feedstock

In December, we signed a two-year contract between Hawaiian Electric and Maui-based Pacific Biodiesel Technologies to purchase biodiesel processed from waste cooking oil and other local feedstocks. Pending Hawai'i PUC approval, the biodiesel would be used at our 110-MW Campbell Industrial Park generating station and other O'ahu power plants.

LNG as a Transition Fuel Source

As we work toward the long-term goal of 65 percent of generation from renewable energy by 2030, our companies are pursuing the use of LNG as a less expensive and cleaner alternative to oil. LNG would allow us to reduce customers' electric bills and improve environmental quality during the ongoing transition to more renewables.

We plan to use containerized shipping in the near-term to provide quicker access to LNG that will help us meet stricter environmental air quality standards. We're also exploring the option for receiving bulk shipments of LNG.

Finalists of a competitive bidding process have been selected to potentially supply up to 800,000

tons of LNG per year, starting in late 2018/early 2019. Once a contract is negotiated, the project will be subject to approval from the Hawai'i PUC and other regulatory approvals and permits.

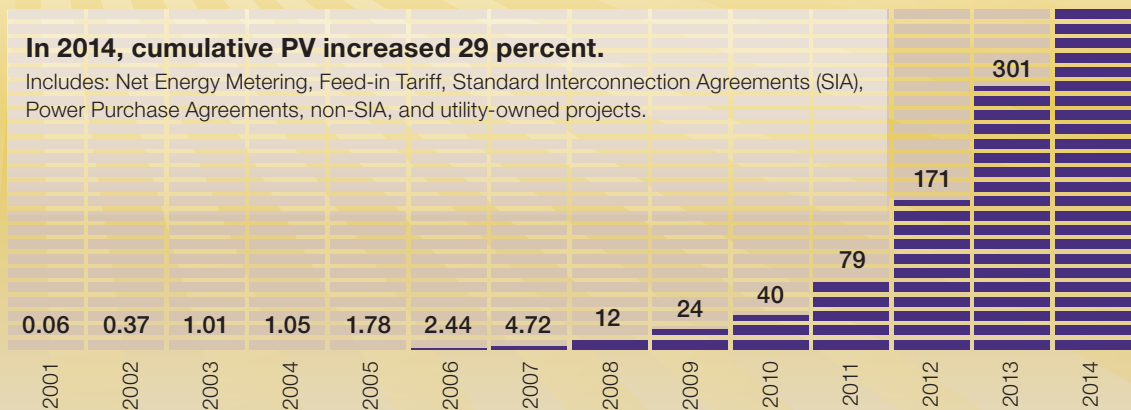
Concurrently, we reached an agreement with FortisBC Energy for capacity to liquefy the natural gas—a critical piece in the supply chain.

SOLAR

Cumulative PV Installations measured in MW

In 2014, cumulative PV increased 29 percent.

Includes: Net Energy Metering, Feed-in Tariff, Standard Interconnection Agreements (SIA), Power Purchase Agreements, non-SIA, and utility-owned projects.



As the demand for residential rooftop solar PV continues to grow, we have been exploring new technologies to address challenges that intermittent resources, such as solar, pose on our electric grids.

In February 2014, we revised our interconnection rules so that small, residential systems that meet certain technical requirements can be interconnected to circuits with high amounts of PV, without compromising safety or reliability.

The new rules in 2014 increased circuit penetration levels from 100 percent to 120 percent of the daytime minimum load.¹

In late 2014, we also made a commitment to clear the vast majority of the existing queue of customers waiting to interconnect on circuits with high amounts of PV by April 2015, provided they met certain safety and reliability requirements. We have successfully met this commitment.

1. In early 2015, we modified our interconnection policies to more than double the solar threshold for neighborhood circuits from 120 percent of daytime minimum load to 250 percent. In many cases, this will eliminate the need for a longer and costly interconnection study.

Collaborative Studies

In 2014, we partnered with Solar City, the National Renewable Energy Laboratory and the Electric Power Research Institute to identify potential safety and reliability issues related to voltage spikes and power surges from high levels of solar PV.

These studies of inverters (devices that convert solar power to the appropriate current needed for the electric grid) aided our decision to further increase the threshold for PV penetration from 120 percent of daytime minimum load to 250 percent.

New Solar Projects

Eight power purchase agreements for new solar projects on O'ahu were submitted to the Hawai'i PUC for approval. Together the projects total more than 240 MW of generation. The projects include:

Project Name	Location	Developer	MW
Ho'ohana Solar	Waipahu	FCHQC Development LLC (Forest City)	19
Ka Lā Nui Solar	Wai'anae	NextEra Energy Resources	14
Kawailoa Solar	Waialua (at existing wind farm)	First Wind	49
Mililani South PV I	Mililani	First Wind	20
Mililani South PV II	Mililani	First Wind	15
Waianae Solar	Wai'anae	Eurus Energy America	28
Waiawa PV	Waipi'o	First Wind	46
Waiawa Solar	Waipi'o	Sun Edison	50

Feed-In Tariff Program

The Feed-In Tariff (FIT) program was designed to facilitate renewable energy development by allowing owners to sell electricity to our companies at a fixed rate for 20 years. To date,

it has enabled approximately 15 MW of clean, solar power. In 2014, the Hawai'i PUC approved a revised plan for administration of the FIT queues with a goal of promptly moving ready-to-install projects to completion.

Electrification of Transportation

We continue to support Hawai'i's clean transportation goal to lower the state's dependence on foreign oil by improving electric vehicle (EV) charging infrastructure and offering programs that encourage EV adoption in Hawai'i.

Helping Customers Recharge

As part of our Maui Electric pilot program to alleviate EV "range anxiety" and provide fast charging alternatives for drivers who cannot charge at home, we installed a public fast charger at our Kahului office. This charging station is open 24 hours a day, 7 days a week. Customers can fully charge their EV in 15–30 minutes and can take advantage of variable pricing based on time of day.



Energy Storage

We are exploring energy storage options to help maintain reliable service and support the growth of intermittent renewable energy resources. Energy storage has the capability to “smooth out” the variability of energy coming from intermittent sources or store energy to stabilize sudden drops in generation, which are common for both wind and solar.

Energy Storage Demonstration Project

Our Hawaiian Electric staff is working with Stem Inc. to utilize its 1-MW energy storage demonstration project funded by Hawai‘i’s Energy Excelsior, a resource provider for clean energy startups. The three-year demonstration project will use energy storage and data analytics to predict and rapidly respond to spikes in customers’ electricity demands by utilizing stored power provided from customer-sited resources.

Energy Storage Testing

At Hawai‘i Electric Light, we are partnering with the State of Hawai‘i and Hawai‘i County to test and evaluate energy storage units at the Hawaii Ocean Science and Technology Park in Kailua-Kona, managed by the Natural Energy Laboratory of Hawaii Authority (NELHA). NELHA plans to offer low-cost outdoor and indoor sites for testing up to 30 kilowatt-hours of power, power sensors, and real-time monitoring data of energy storage devices.

Battery Storage Testing

Our partnership with the Hawaii Natural Energy Institute will study different aspects of energy storage. An O‘ahu project will investigate how

battery technology can be used to overcome limits on the amount of intermittent renewable energy the utility can safely interconnect. A project on Moloka‘i will use energy storage to address a combination of high solar PV penetration and relatively limited amount of conventional generating capacity. On Hawai‘i Island, the study will evaluate the effectiveness of battery systems to “smooth out” voltage fluctuations and manage system frequency.

Energy Storage Projects Ahead

In response to an April 2014 request for proposals, our Hawaiian Electric team narrowed the search in September and has entered negotiations with three internationally-recognized battery energy storage developers to provide up to 200 MW of renewable energy storage for up to 30 minutes on O‘ahu. The projects must be approved by the Hawai‘i PUC prior to development.

SunShot Initiative Grant

A \$500,000 grant from the U.S. Department of Energy’s SunShot Initiative is allowing us and our partners to improve forecasting of solar and wind resources. This enables us to better manage the impact that growing amounts of distributed generation have on our electric grids.

Grid Modernization



grid to improve outage detection and restoration. Smart grid also provides more information to help customers better manage their electricity use and lower their electric bill. Tools include an online Web portal that allows customers to monitor their energy use patterns and make adjustments to control their energy costs. In the future, new payment options can also be offered to customers.

As the smart grid network expands, other benefits include fully automated detection of outages and support for integration of more low-cost renewable energy and more service options.

Smart Grid Technologies

As part of our grid modernization efforts, we announced in March 2014 plans to begin installing smart grid technologies for 5,200 customers on O'ahu in Moanalua Valley and portions of Pearl City, Diamond Head, Kaimukī, Kāhala and Waikīkī. These initial neighborhoods were selected because of the diverse customer mix and physical terrain. The smart grid wireless communications infrastructure, including new advanced meters for customers, integrates with the existing electric

Grid-Interactive Water Heater Program

Among other smart technologies being tested, we launched a one-year trial of Grid-Interactive Water Heaters installed in residential and small and medium-sized businesses on O'ahu. Working with Kanu Hawaii, a non-profit community partner, the project is testing the technology's ability to assist with everything from multi-hour load-shifting to second-by-second grid regulation to help shift energy use to certain times of the day when solar PV and wind farms are producing the most energy.



More than 100 of our Hawaiian Electric employees and volunteers from the Blue Planet Foundation, an independent environmental advocacy group, teamed up to share information with the communities selected for the smart grid upgrades. Volunteers visited residents through door-to-door canvassing and organized open house events to discuss project details and answer customer questions.

Demand Response Programs

Enhanced demand response (DR) programs are another component of our grid modernization initiatives. Under DR programs, participating customers receive financial incentives for shifting energy use to certain times of the day or for voluntarily allowing the output of certain appliances or equipment to be adjusted if necessary to help maintain reliable service for all our customers.

We currently have four DR programs on O'ahu and one DR program on Maui and hope to expand our portfolio to provide customers with more options to save on their electric bills while supporting the adoption of more clean energy. In 2014, we filed an Integrated Demand Response Portfolio with the Hawai'i PUC, proposing new and enhanced programs for customers on O'ahu, Maui and Hawai'i Island, and later for Moloka'i and Lāna'i.

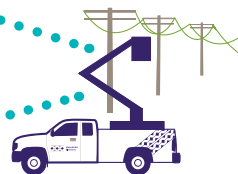
Smart Grid

HOW A SMART GRID WORKS



With improved management of electricity on the grid, more renewable energy sources can feed into the electric grid and help reduce Hawai'i's dependence on imported oil.

Through remote outage troubleshooting, Hawaiian Electric is able to pinpoint problems on the grid and fix problems faster, providing customers with more reliable service.



The smart meter records energy use data and transmits this information to Hawaiian Electric through a secure wireless network.



Energy use data is updated in customers' personal Web portals. You will have access to more information to help you better understand and manage your energy use.



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“DR programs are a win-win for our customers and the environment,” said Shelee Kimura, our Hawaiian Electric vice president for corporate planning and business development. “With DR, customers get financial rewards that lower their monthly bills. We reduce the use of more expensive generators to meet electricity needs. And together we can unlock the potential for more low-cost renewable energy.”

Caring for Our Environment

At our companies, we are committed to conducting our business and operations in a manner that protects Hawai'i's unique environment and preserves its rich historic and cultural heritage.

Green Fleets

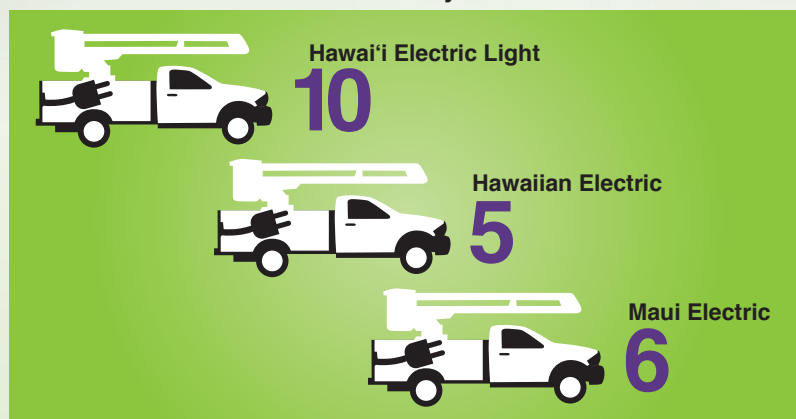
In 2014, our Hawai'i Electric Light fleet was recognized for the second consecutive year by Heavy Duty Trucking as one of the nation's top 50 green fleets that is ahead of the curve in its sustainability efforts. Amongst other winners, only three other utilities in the nation were recognized for this award. In addition to saving on fuel costs, these fleets push for sustainability in everyday operations, such as improving fuel economy and reducing greenhouse gas emissions, using alternative fuels, and building green facilities with

recycling programs, energy-efficient lighting, solar panels and more.

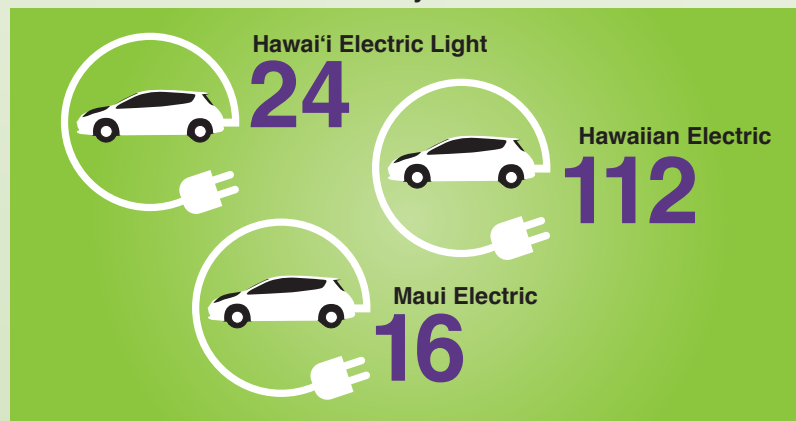
Paperless Billing

To further reduce our carbon footprint while providing customers with more flexible options, we launched a paperless billing campaign, which enables customers to access e-statements through our Online Customer Service Center and review their billing and payment history for the previous 12 months. Other self-service features include the ability to start, stop, or transfer service; enroll in free automatic bill payment services; and update account information.

Total number of biodiesel-electric hybrid bucket trucks in 2014



Total number of on road EVs or hybrids in 2014



Clean Sweep of Kahe Beach

As part of the Ocean Conservancy's annual International Coastal Cleanup, our Hawaiian Electric employees, retirees and their 'ohana spread out along Electric Beach, across from our Kahe Power Plant, to bag and record more than 500 pounds of marine debris and trash in an effort to keep the popular beach spot clean. We have participated in the coastal cleanup for more than 25 years.



Left to Right, our Hawaiian Electric President and CEO Alan Oshima, Emily Lee, and David Lee were among the volunteers who got their hands dirty to help pick up trash during the beach cleanup.

Avian Species Workshops

In June, our Hawaiian Electric team co-hosted a Hawai'i Avian Species Workshop for Utilities with the State Division of Forestry and Wildlife to increase awareness of Hawai'i's unique bird species and to foster a collaborative venue for sharing insights, experiences and best practices for protecting avian species.

Preserving Protected Wetlands for Endangered Species

Our Hawaiian Electric volunteers joined forces with Livable Hawaii Kai Hui and the Trust for Public Land, along with other businesses and community members to pull weeds, dig up old fence posts, and turn shrubs into mulch to help restore the Hāwea Heiau and Keawāwa Wetland. The protected wetland is home to a number of endangered species, including the 'ālae 'ula, or Hawaiian moorhen; the 'auku'u, or black-crowned night heron; and the Hawaiian dragonfly.

Celebrating Earth Day from the Mountain to the Sea

At Hawaiian Electric, we sponsored the Sustainable Coastlines Hawaii Mauka to Makai Earth Day celebration, an event organized to inspire local communities to participate in cleanups across O'ahu. Local non-profits, community groups, and over 500 volunteers assisted with planting 700 native plants, adding 7,800 pounds of coral to fortify fishpond walls in He'eia and removing 3,739 pounds of debris from the coastlines, of which 300 pounds were recycled. At Kalama Beach in Kailua, our volunteers sifted sand for microplastic debris and picked up 470 pounds of trash to protect the ocean and marine life from human pollution.

Helping Our Renewable Energy Partners

In February 2014, our Maui Electric employees partnered with Sun Edison to clear invasive grass and weeds at their Kaheawa Wind I and II wind farms. Removal of invasive species encourages the seeding of native Hawaiian plants like 'ōhi'a lehua and alahe'e, which beautify the area and are also wind and drought tolerant.

Utilizing Native Sea Life to Eradicate Invasive Algae

Since 2011, our donations to The Nature Conservancy have been helping restore a vital ecosystem on Windward O'ahu by supporting the cultivation of native herbivorous sea urchins to stop the spread of non-native, invasive algae in Kāne'ohe Bay.



Hank Lynch of The Nature Conservancy and Robert Kahawai of Hawaiian Electric hold baby sea urchins. Also on hand are Brian Nielson (far left) of the state Aquatic Resources Division, which raises the urchins, and Hawaiian Electric employee John Lu'uwai.

With a corporate grant and participation from our Hawaiian Electric employees, volunteers helped to revive the Waikalua Loko I'a—an ancient Hawaiian fishpond in Windward O'ahu. In November, more than 160 of our employees along with their friends and 'ohana labored tirelessly to uproot invasive mangroves and California grass; remove more than 28,000 pounds of invasive limu from the pond; clean the shoreline and laystones for the fishpond wall; finish constructing the fishpond tool shed; and transport truckloads of green waste for mulch. Waikalua Loko I'a today serves as a living lesson in traditional and modern fishpond practices for more than 5,000 students and groups that annually visit and tour the site.

Serving Our Customers and Communities

2014 was a challenging year as Hawai'i mobilized resources for an earthquake-generated tsunami, two major tropical storms and persistent lava flow. From these events, we learned important lessons on the powerful force of nature and the critical need to be prepared.



Working Together to Respond to Tropical Storm Iselle

When Tropical Storm Iselle hit the islands in August, it caused significant damage to the transmission and distribution infrastructure on Hawai'i Island, leaving thousands of customers without power, primarily in the Puna area.

Our Hawai'i Electric Light crews began repairs and were joined by crews from almost all islands who assisted with restoration efforts. We established a Customer Information Center at a centralized location in the Puna area to provide information on restoration efforts and offer free wireless internet and cell phone charging stations. Other organizations and companies provided

food, water, ice and other necessities to center visitors. We also used social media to proactively communicate updates and status reports on the restoration process to customers.

While Hawai'i Island took the brunt of the storm, Iselle's heavy rains and strong winds also reached Maui County and some parts of O'ahu. Our crews worked around the clock to safely restore power to customers.

Through it all, we saw the true meaning of the aloha spirit. Service to all Hawai'i Island customers was restored in less than three weeks, and this was possible because of the collaboration between the utilities, State of Hawai'i, County of Hawai'i, local businesses, and community organizations.

Hawai'i Island United Way Funds Provide Relief to Those Impacted by Storm Iselle

In the aftermath of Tropical Storm Iselle, our companies donated \$25,000 to Hawai'i Island United Way to provide immediate relief to Hawai'i Island residents impacted by the natural disaster. In addition, more than \$5,000 was raised by our employees with matching funds from our Hawaiian Electric Industries Charitable Foundation.

Lava Flow Spurs Innovation and Collaboration

As the unpredictable lava flow approached utility infrastructure in June 2014, our Hawai'i Electric Light employees were challenged with developing several contingency plans to provide uninterrupted service to customers on Hawai'i Island.

One of those plans was to design a protection for utility poles in the flow's path. We worked collaboratively with the University of Hawai'i at Hilo and the U.S. Geological Survey's Hawaiian Volcano Observatory on an experimental design that not only could withstand extreme temperatures and be installed cost effectively, safely and quickly, but was respectful of the Hawaiian culture. The innovative design involved wrapping the pole with readily available heat-resistant and dispersive material. Only one protected pole on the transmission line was surrounded by lava. Although it burned slightly, it remained standing and allowed our crews to install steel poles, fortify the line, and maintain continuous service.





During Tropical Storms Julio and Iselle, we used our Twitter and Facebook accounts to provide timely updates to the 21,900 customers who lost power on Hawai'i Island, 8,000 customers who lost power in Maui County and 2,400 customers who lost power on O'ahu.

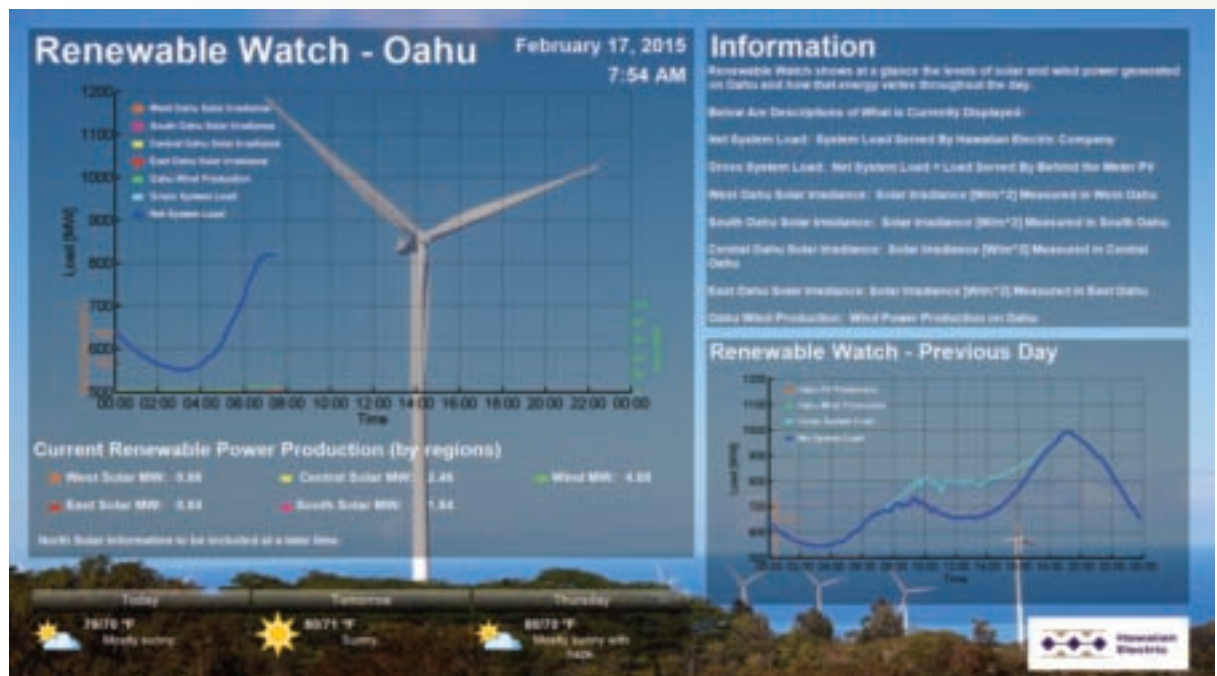
Connecting with Customers through Social Media

As a way to engage with our customers and to provide more instant and frequent communication, our companies launched Twitter and Facebook accounts to join our YouTube, Flickr and LinkedIn pages. We also expanded our social media reach with Instagram and Google+.

- On Facebook, we feature daily postings on safety and clean energy tips, updates on community events and the latest information on all of our companies.
- Our Twitter accounts—@HwnElectric for O'ahu, @MauiElectric for Maui County and @HIElectricLight for Hawai'i Island—are primarily used to update our customers on outage restoration and system emergencies, among other energy-related news and information.

"Renewable Watch" Displays Each Island's Variable and Firm Energy Resources

In March, our companies began sharing "Renewable Watch," a new online resource that displays the daily contribution of solar and wind generation to the O'ahu, Maui and Hawai'i Island electric grids, and the fluctuations of these resources throughout the day. By tracking power generation and demand for electricity, these displays help underscore the variable nature of solar and wind power while demonstrating the important role of the "firm" power generated at power plants.





Clean Energy Fairs

We kicked off Energy Action Month in October by hosting Clean Energy Fairs for all island communities that we serve. The free family-friendly events brought together organizations and businesses involved in resource conservation, energy efficiency, and clean energy initiatives. Booths featured educational exhibits on clean energy, EVs, energy programs, energy rebates, electrical safety, and emergency preparedness.

Maka, The Super Energy Saver, Unveiled at Clean Energy Fair

Maka, The Super Energy Saver energy guide made its debut at our Hawaiian Electric Clean Energy Fair in October. The free pamphlet was designed to help customers manage their electricity use by engaging keiki in energy conservation with the help of a wise cartoon owl, Maka. The caped crusader and his energy saving tool belt is featured in the colorfully illustrated, interactive booklet that uses games and activities to help keiki and their parents put a stop to household energy waste.



Educating Hawai'i's Future Leaders

We partnered with outstanding educators and sponsored a wide variety of educational programs, reaching more than 70,000 students and teachers in 2014.

Education Programs and Classroom Presentations

Our employees promoted energy education at community events throughout the islands, and visited schools and classrooms to talk about electrical safety, clean energy, energy conservation, and renewable energy technologies.

- **Ma Ka Hāna Ka 'Ike (Hāna School Building Program)**—Funds from Maui Electric and the Hawaiian Electric Industries Charitable Foundation were donated to the 2013–14 Building for Sustainability Program to ensure they can continue to provide Hāna youth with vocational training that emphasizes self-sufficiency and long-term sustainability.

- **Keonepoko Elementary**—Preschoolers at Keonepoko Elementary were treated to an electrical safety presentation from our Hawai'i Electric Light employees just before the lava flow forced the school to close. Students learned what a lineman does to stay safe on the job, dangers of substations and power lines, and what to do in an emergency.



- **Outreach in Moloka'i**—Our Maui Electric employees spent time with Moloka'i Middle and Kaunakakai Elementary students to talk about power outage procedures and emergency preparedness in anticipation of the upcoming hurricane season.



Our Maui Electric employees spent two days in Hāna to give a live electrical safety demonstration and provide clean energy education to students ranging in age from preschool to high school seniors at Hāna High and Elementary.

Hawaiian Electric Industries Helps Hōkūleʻa Set Sail



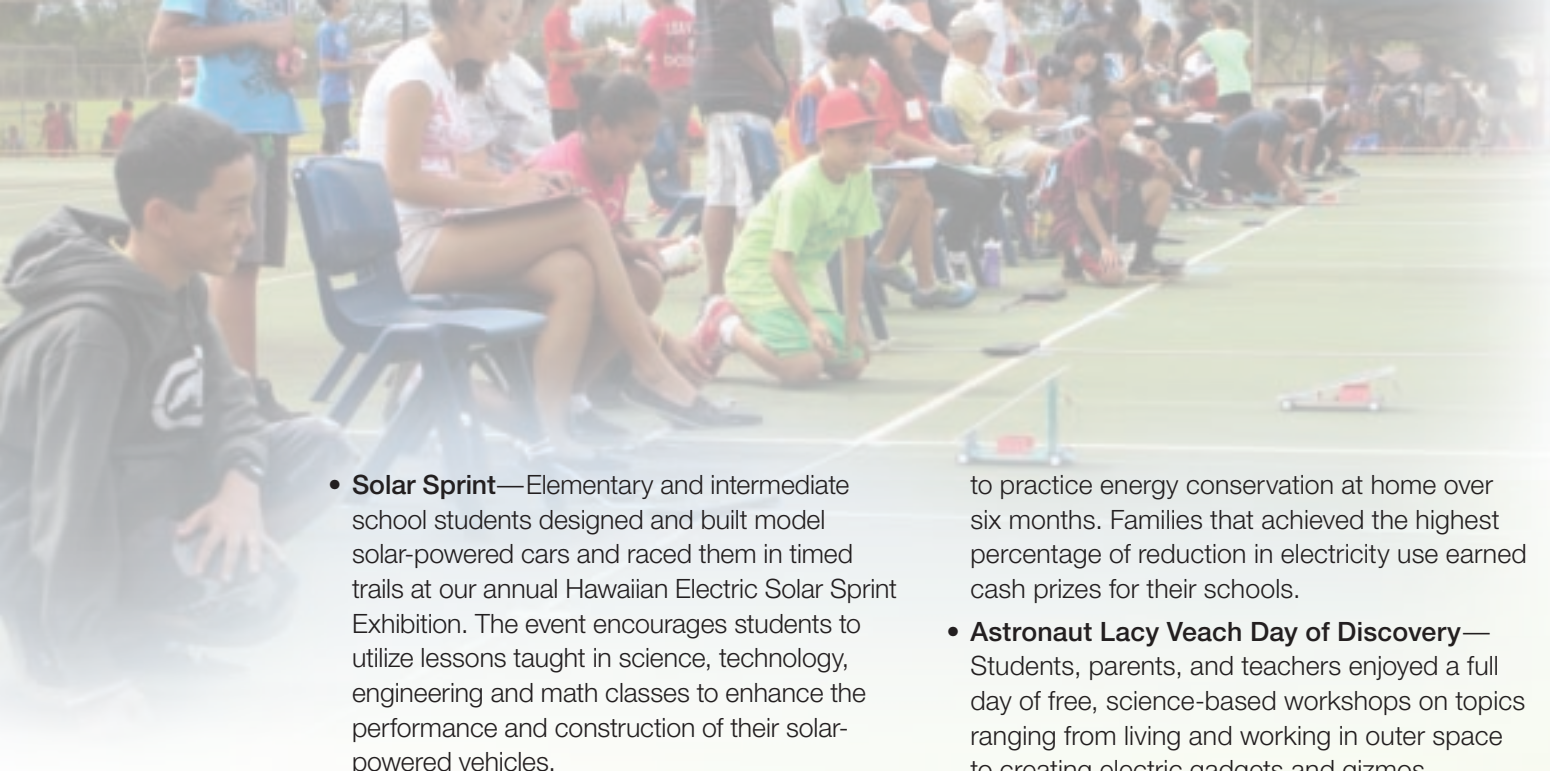
- In support of an extraordinary around-the-world odyssey by the long-distance canoes Hōkūleʻa and Hikianalia, Hawaiian Electric Industries awarded the Polynesian Voyaging Society (PVS) a five-year, \$250,000 grant to help document the voyage around the world.

Of particular interest to our companies is the eco-friendly Hikianalia, a solar- and wind-powered vessel that is conducting research projects and promotes sustainability and conservation through educational programs and outreach. As they travel 47,000 nautical miles and visit 26 countries and more than 80 ports, crew members will collect, interpret and share scientific and cultural data to provide “canoe to classroom” activities and online learning trips at ports for people in Hawaiʻi and a global audience to join.

- **Solar Boat Regatta**—Hawaiʻi Electric Light celebrated its annual Solar Boat Regatta where more than 600 fifth-graders, teachers, and parents across the island gathered to see students race their boats built from recycled materials, a small electric motor, and small solar panel. Winners of the “Most Seaworthy Waʻa” category had the opportunity to have their boats travel on the PVS’ Mālama Honua journey around the world.



Young navigators of the Hōkūleʻa assisted with placing the winning solar boats in the water along their voyage.



- **Solar Sprint**—Elementary and intermediate school students designed and built model solar-powered cars and raced them in timed trails at our annual Hawaiian Electric Solar Sprint Exhibition. The event encourages students to utilize lessons taught in science, technology, engineering and math classes to enhance the performance and construction of their solar-powered vehicles.



- **Home Energy Challenge**—For the seventh year, we partnered with the Hawai'i Department of Education (DOE) and elementary schools to teach students valuable lessons about energy conservation and sustainability. As part of our Hawaiian Electric Home Energy Challenge, students and their families were encouraged

to practice energy conservation at home over six months. Families that achieved the highest percentage of reduction in electricity use earned cash prizes for their schools.

- **Astronaut Lacy Veach Day of Discovery**—Students, parents, and teachers enjoyed a full day of free, science-based workshops on topics ranging from living and working in outer space to creating electric gadgets and gizmos.
- **Science Bowl**—The state's elite math and science high school students converged at this annual event to face-off in a fast-paced question and answer format similar to the TV game show Jeopardy. Teams were tested on a range of science disciplines including biology, chemistry, earth science, physics, energy, and math.

Guiding Hawai'i's Youth Toward Science and Technical Careers

To encourage career and technical education for Hawai'i's youth, we provided hands-on experiences and project-based learning opportunities for students and schools.

- **Kealakehe High Career Fair**—At Hawai'i Electric Light, our employees brought their careers to life for over 150 students who attended the Kealakehe High School Career Fair. Students had an opportunity to ask questions and learn about career paths in the company, as well as perform simple tasks with some of the tools and protective equipment used by linemen.





- **Introduce a Girl to Engineering Day**—Our Maui Electric employees once again participated in this annual event to inspire young women to pursue careers in science, technology, engineering and math. By involving the students in activities such as designing a working electrical circuit board, our engineers demonstrate the creative and collaborative side of engineering and how engineers are changing our world.



- **Hawaiian Electric's Summer Internship**—A two-week summer internship provided incoming high school seniors with real-world work experience in various areas across our company. Interns were paired with mentors who enjoy sharing their knowledge and teaching new skills while imparting invaluable life lessons. The internship program is a partnership with the Hawai'i DOE and has been offered annually since 1995.

STEM Programs

Inspiring and motivating students to excel in science, technology, engineering and mathematics (STEM) is critical to their success in college, career and life. In 2014, we contributed both financial support and volunteer involvement to advance STEM education learning and enrichment programs for Hawai'i youth, including:

- **Hawai'i FIRST Lego League Championship**—Nearly 600 students, ages 9–14 years, were challenged to think like scientists and engineers to solve a real-world problem using Legos, sensors, motors and gears to design, construct and program their robots to challenge other teams' robotic inventions. The fun, creative, hands-on robotics program is designed to ignite enthusiasm in children for discovery of the basic STEM principles.
- **Hawai'i VEX State Championships**—Teams made up of middle and high school students were tasked to build the most innovative robot to out-score their opponents in head-to-head time matches.
- **Hawai'i MATHCOUNTS® Competition Series**—The best and brightest middle school students competed in a series of individual and team rounds to demonstrate their mathematical abilities in problem-solving, analytical and logical thinking.



NextEra Energy Merger

In December, our parent company Hawaiian Electric Industries and Florida-based NextEra Energy, one of North America's top producers of wind and solar energy, announced plans to merge. NextEra Energy and our companies share a common vision for a more affordable clean energy future for Hawai'i. Details of the proposed transaction were filed with the Hawai'i PUC and are currently under review for approval.



Environmental Benefits

This report is printed with vegetable-based inks containing 80 percent Bio Renewable Content, and is printed on an environmentally responsible paper that is processed chlorine free and meets the requirements of the American National Standards Institute for longevity.

By using this paper, we conserved the following resources:

Trees: 23 fully grown

Water: 10,658 gallons

Energy: 10 million BTUs

Solid Waste: 714 Pounds

Carbon Emissions: 1,965 Pounds

Calculations derived from the Environmental Paper Network Paper Calculator (papercalculator.org) are based on a quantity of 3,500 reports using 1,900 pounds of Forest Stewardship Council® certified 100 percent post-consumer-waste recycled paper that is manufactured carbon neutral Verified Emission Reductions using 100 percent renewable electricity under a third-party certified International Organization for Standardization 14001 Environmental Management System.

The Paper Calculator algorithm was developed by The Paper Task Force and is now owned and operated by the Environmental Paper Network.



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A decorative horizontal band featuring a repeating geometric pattern of interlocking diamonds and zig-zags in shades of gray and white.



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