



**Hawaiian
Electric**

NEWS RELEASE

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5-year action plan to harden electric grids will prepare islands for increasing threat from severe weather events

Cost of less than \$1 a month provides broad resilience benefits

HONOLULU, July 1, 2022 – Hawaiian Electric plans to begin hardening its island grids as part of a major investment in resilience that will enable its systems to better withstand severe events, including weather-related disasters fueled by climate change.

The company filed an application with the Public Utilities Commission (PUC) to invest about \$190 million on O‘ahu, Hawai‘i Island, Maui, Moloka‘i and Lāna‘i over five years in the proposed Climate Adaptation Transmission and Distribution (T&D) Resilience Program. The proposed five-year plan includes a slate of initial, foundational grid resilience investments as the first phase of an anticipated long-term climate adaptation effort. Investing in a more resilient power system will reduce the severity of damage when major events happen and allow service to be restored to customers more quickly.

“Reliable electric grids are a critical driver of Hawai‘i’s economic activity and prosperity,” said Colton Ching, senior vice president of planning and technology at Hawaiian Electric. “There’s an urgent need to enhance our power systems to guard against extreme weather events that are increasing in both frequency and intensity due to climate change.

“While there is a cost to preparing for more adverse effects of climate change, the cost of inaction is much higher,” Ching added.

Hawaiian Electric is seeking approval to recover the cost of the project from customers. The company estimates that the average monthly bill impact for a residential customer using 500 kilowatt hours will be \$0.33 on O‘ahu, \$0.86 on Hawai‘i Island and \$0.71 in Maui County. Hawaiian Electric is also pursuing federal funding opportunities to offset costs.

Hawaiian Electric owns, operates and maintains 9,400 miles of transmission and distribution lines that power the state’s economy and provide service to 95% of the population.

Among the investments proposed by Hawaiian Electric:

- Strengthen the most critical transmission lines to withstand extreme winds
- Bolster distribution lines serving critical community lifeline facilities such as hospitals, military facilities, communications infrastructure, water and wastewater facilities, emergency response facilities, and emergency shelters
- Harden targeted utility poles that could otherwise significantly impede or delay restoration efforts if compromised

- Enhance vegetation management to prevent trees from falling into lines in a storm. This program would augment existing vegetation management efforts
- Strengthen lines and deploy devices to help prevent and respond to wildfires
- Install equipment in potentially vulnerable substations to reduce flood impacts

The company adopted a “no-regrets” approach in planning for the project, meaning the measures can be put in place now without being certain about all the dimensions of future climate change. No-regrets actions are cost-effective now and under a range of future climate and grid scenarios and do not involve difficult tradeoffs with other policy objectives. The initiatives chosen were based on industry best practice as well as significant input from stakeholders consisting of government, private and community groups.

The proposal focuses on grid assets that are the most critical and vulnerable. For example, the company plans to install equipment in substations most prone to flooding and upgrade potential weak links on its most important transmission and distribution lines. From 2023 to 2027, Hawaiian Electric plans to harden roughly 500 poles on O’ahu, 400 poles on Hawai’i Island and 300 poles in Maui County.

The investments will complement Hawaiian Electric’s ongoing efforts to expand the use of microgrids and distributed energy resources, such as rooftop PV and batteries. Customer-sited solar and batteries can provide energy to the grid following a severe event. Under such a scenario, robust grid infrastructure would be needed to combine the output from multiple distributed resources and move the energy to where it is needed.

In response to legislation passed in 2018, Hawaiian Electric has prioritized the development of microgrids, which can not only isolate and provide power for a customer or group of customers when there is damage to the larger grid but can also increase overall system resilience and reliability when connected to the larger grid by providing services such as energy storage. The proposed resilience program will harden electricity distribution infrastructure and lay the foundation for future microgrids.

Hawaiian Electric’s application to the PUC also notes how grid-scale renewable energy projects may be available to provide energy to the grid following a severe event. This can be particularly beneficial if access is cut off to fuel for conventional generators.

Island-specific initiatives include:

Hawai’i Island — Strengthen one of the four cross-island ties to ensure that renewable energy generation on the east and west sides of the island would be able to support the entire island.

O’ahu — Move selected single-phase neighborhood overhead lines underground in areas prone to damage from vegetation.

Maui — Install distribution feeder ties at isolated substations that currently do not have backup.