

Hawaiian Electric Was Warned of Its System's Fragility Before Wildfire

The utility knew it needed to upgrade its equipment but did not make changes that could have reduced risks of fires, energy experts said.



By Ivan Penn and Peter Eavis

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Hawaiian Electric has known for years that extreme weather was becoming a bigger danger, but the company did little to strengthen its equipment and failed to adopt emergency plans used elsewhere, like being prepared to cut off power to prevent fires.

Before the wildfire on Maui erupted on Aug. 8, killing more than 100 people, many parts of Hawaiian Electric's operations were showing signs of stress — and state lawmakers, consumer groups and county officials were saying that the company needed to make big changes.

In 2019, Hawaiian Electric itself started citing the risk of fires. The company said that year that it was studying how utilities in California were dealing with similar threats.

Two years later, in a report about Hurricane Lane in 2018, the Maui County government warned of the potential that “aboveground power lines that fail, short or are low-hanging can cause fire ignition (sparks) that could start a wildfire, particularly in windy or stormy conditions.”

But it wasn't until last year that the company asked state regulators to authorize it to spend \$190 million to strengthen power poles and other equipment — a request that is still pending. Even when it is approved, the work will take several years to complete.

Attention turned to the company after the emergence of a video recorded on Aug. 8 that appeared to show a power line in Lahaina throwing off sparks and igniting dry grass just hours before the fire devastated the city. In addition, data from sensors owned by a company called Whisker Labs appear to show major faults with the company's systems just as the wind picked up.

“This is not a highly reinforced system,” Robert McCullough, of McCullough Research, an energy consulting firm in Portland, Ore., said about Hawaiian Electric's system. “It has not been hardened.”

Utility executives and regulators across the United States have been stunned by the ferocity and frequency of weather-related disasters in recent years, including several major wildfires in California and the 2021 winter storm in Texas that left much of the state without light or heat for days.

But energy experts say these calamities and their effect on electric grids should not have been surprising. In many places, utilities have neglected to sufficiently maintain and improve electric grids for decades, and regulators and lawmakers have largely looked the other way.

“The problem with the electric utilities in the United States is they act like the protected monopolies in the face of catastrophic risk,” said Michael Wara, a scholar focused on climate and energy policy at Stanford University who thinks Hawaiian Electric could have done a lot more to prevent its equipment from becoming a potential cause of fires. “But nature doesn't care that they're a protected monopoly. You need to act like a regular company facing a major risk.”





The utility's poles may not have been strong enough to stay standing in the winds that hit Lahaina. Max Whittaker for The New York Times

The industry has known for years that electrical equipment can set off fires when high winds cause poles and power lines to break and collide with dry vegetation. Power lines can also set off fires if they become overloaded because utilities haven't upgraded them or put in place other safeguards.

"Substantial investments in adaptation, hardening and resilience are being made to help mitigate risk," said Scott Aaronson, senior vice president of security and preparedness at the Edison Electric Institute, a utility industry trade organization.

Electric utilities in California have had to pay billions of dollars to fire victims in recent years. Hawaiian Electric might have to make big payouts, too. At least four lawsuits have been filed on behalf of Maui residents, and the company's shares and bond prices have plunged.

In a securities filing on Friday, Hawaiian Electric said that it was consulting with advisers as it seeks "to endure as a financially strong utility that Maui and this state need."

Officials from the U.S. Bureau of Alcohol, Tobacco, Firearms and Explosives, including an electrical engineer, are helping the Maui fire department determine the cause of the fire. The bureau is the primary federal agency that investigates fires and arson.

Hawaiian Electric is a unique utility. Because the state is made up of many islands spread over 1,500 miles, the company operates many electric grids and imports fuel to run power plants. As a result, the state has the highest electricity rates in the country. That makes it much harder for the company and the state to invest in expensive grid upgrades.

"There's always been a push and pull on how to pay for it," State Senator Gilbert S.C. Keith-Agaran said, referring to plans to improve the electric grid. "The utility doesn't want to pay for it unless they can pass on the cost to the ratepayers."

The \$190 million proposal Hawaiian Electric made to improve its grid would, among other things, have replaced aging power poles with new ones, including 80 in Maui. Energy experts said many of the company's poles were probably not strong enough to withstand winds that hit Lahaina.

Some of the company's poles are surrounded by invasive grasses that can become explosive tinder in the dry season. Experts have long warned that too little was being done to check the spread and growth of the grasses.

"A lot of our concerns were that this infrastructure is way past due," Jennifer Potter, a former member of the Hawaii Public Utilities Commission who lives on Maui, said, pointing in particular to the poles. "Many that have been compromised have been compromised for years."

Ms. Potter left the commission in November after four years there.

The commission did not respond to a request for comment.

Hawaiian Electric said it had spent \$111 million on vegetation management and \$287 million on equipment replacement, strengthening the grid, inspections and using technology like drones and laser imagery to monitor and control the grid since 2018.

"We're going to look at every decision we made, every tactic we employed to act on the wildfire threat on Maui," said Jim Kelly, a spokesman for the utility. "Outside voices speak confidently about what happened and what we did or didn't do, but the facts are that we took the threat seriously and were confronted by an extraordinary climatological event on Aug. 8."

But some experts say Hawaiian Electric should have done more.

Mr. Wara said that Hawaiian Electric could have established a power shut-off program in consultation with local authorities and emergency services. In California, after warning residents and local officials, utilities shut off power when high winds approach to reduce the chance that power lines will ignite fires.

Henry Curtis, executive director of Life of the Land, a Hawaii nonprofit group that represents consumers before the state Public Utilities Commission, said he “strongly supports” power shut-off programs. The utility, he said, has been dismissive of the idea.

“We’ve been raising climate change for more than two decades, and the utility has been really slow in dealing with it,” Mr. Curtis said. “Certainly Hawaiian Electric knew that Lahaina was the most vulnerable place. They’ve known that for years.”

Shelee Kimura, Hawaiian Electric’s chief executive, said after the fire that the company had not shut off power in Lahaina because electricity was needed to keep water pumps and medical devices running.



The wildfire in Lahaina killed more than 100 people. Go Nakamura for The New York Times

“In Lahaina, the electricity powers the pumps that provide the water — and so that was also a critical need during that time,” Ms. Kimura said at a news conference on Monday. “There are choices that need to be made — and all of those factors play into it.”

Many residents in California have complained about utility power shut-off programs. Utilities there have come up with ways to address some of the concerns raised by residents and Ms. Kimura. San Diego Gas & Electric opens shelters that have electricity for residents facing a power shut-off. The utility also provides backup generators to power water pumps and other critical equipment.

Lawmakers in Hawaii, seeing the growing threat of extreme weather linked to climate change, also pursued measures to bolster the grid. Having seen the vulnerabilities of Puerto Rico in Hurricane Maria in 2017, Lorraine R. Inouye, a state senator, introduced a bill in 2018 aimed at strengthening electrical equipment to better withstand natural disasters. The bill did not advance.

“If it went into effect, today we would have been in a better position,” she said.

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