





By the time Gov. Linda Lingle left office in 2010 after two terms, clean energy and Hawaiian Electric Co.'s role in getting the state off fossil fuel-generated electricity were at the center of public discussion, especially in political circles.



Lt. Gov. Duke Aiona mounted an aggressive campaign to take over the state's top job that was built in large part on the GOP administration's successes. His plan called for the state to cut its use of oil in half within eight years — from importing 53 million barrels of oil every year to 26 million barrels.

Aiona believed wind power could replace oil-fired generation. He was one of many in Hawaii who envisioned an undersea cable connecting Oahu to other islands essentially a billion-dollar 65-mile extension cord. Wind farms on neighbor islands. primarily Lanai and Molokai, would generate power for Oahu, where more than two-thirds of the state's population lived.

THE STORY SO FAR

Hawaiian Electric Co. was created in 1891 and has been entwined in Hawaii's economy and politics ever since. It obtained exclusive rights to provide electricity in Honolulu Kingdom was overthrown. The company grew rapidly as the state grew, helping steer the development of Oahu and pulling Hawaii through economic hard times, two world wars and statehood. Its reliance on oil to power generators became a problem that persists today. Still, Hawaiian Electric Industries banked on big investments around the world and at home. But it took a Republican governor to force a commitment to renewable energy. The 125-year-old company is moving in that direction despite a failed takeover bid by a mainland

The so-called Big Wind proposal, introduced by the Lingle administration, was embraced by businesses and residents of Oahu, but vehemently opposed by people on Lanai and Molokai who didn't want dozens of giant wind turbines mucking up their islands just so Oahu could have cheaper electricity. Customers on those islands paid far higher rates for power than people in the county of Honolulu.

The 2010 governor's race saw another candidate who had big dreams of advancing clean energy even further. Congressman Neil Abercrombie had spent the past 20 years in Washington, D.C., representing Hawaii's 1st Congressional District. In 2010, he gave up the seat to run for governor with a vision of creating a Hawaii Energy Authority that would oversee renewable energy efforts.

In November 2010, Abercrombie and running mate Brian Schatz defeated Aiona and his lieutenant governor candidate, Lynn Finnegan, with 58 percent of the vote.

With Big Wind still very much a part of the state's energy plan, Abercrombie moved into the governor's office in December. He was immediately faced with a surprise — the state's fiscal condition was much worse than he'd been led to believe by the Lingle administration.

"What appears on paper as an \$844 million fiscal deficit through the next biennium belies the fact that there is also a severe operational deficit in government," he informed residents in his 2011 State of the State address. "In other words, as difficult as it will be to balance the budget, that effort will merely be life support for

what has become a battered, under resourced, and often dysfunctional democracy."

Abercrombie's plan for a new state agency to oversee the transformation to renewables took a back seat to what he believed were more pressing issues in the face of fiscal disaster — strengthening education and upgrading the state's woefully outdated information technology. Even social services would have to be carefully scaled back, the longtime Democrat feared.

It was a detour from the path set by the Lingle administration and the success of the Hawaii Clean Energy Initiative.

Hawaii Department of Business, Economic Development and Tourism Getting wind energy from Maul County to Oahu



For a time, state and utility officials envisioned connecting the Islands with an undersea interisland cable that would allow them to share power from wind farms on Molokai, Lanai and Maul.

Ted Llu, head of the state Department of Business, Economic Development and Tourism under Lingle, says Lingle left an energy plan that included innovative ideas to spur the rise of biofuels and the installation of a smart grid.

"Literally, there was a document called 'The Road Map.' We thought that Abercrombie could follow it," says Liu.

The document was ignored, he adds, because "every politician wants to put a new thing into place and not be the recipient of a legacy that was passed on."

Still, Hawaii's dependence on oil loomed like a ticking time bomb, and clean energy advocates, including those at Hawaiian Electric Co., tried to find ways to move Big Wind along.

"Why are we in this?" HECO executive vice president Robbie Alm asked at a <u>public information session on Lanai in 2010</u>. "We're in it because Hawaii is absolutely addicted to oil."

In an <u>Independence Day column published by Civil Beat</u> in July 2010, Congresswoman Mazie Hirono urged Hawaii to take the lead on moving to renewable energy.

"We must look to the future and renew our fight to break free of another kind of dependence; our country's crushing dependence on fossil fuels, especially foreign oil," Hirono wrote. "No one feels the pinch of high energy costs more than the people of Hawaii. Ninety percent of our state's energy needs rely on imported fossil fuels. Hawaii is the most oil dependent state in the country. We can't afford to live like this any longer."



HECO relies on crude oil imported from Asia to power many generators that produce electricity, High oil prices equal high electric rates. This tanker is docked at Sand Island.

And Then Things Got Worse

On March 11, 2011, Pacific and Eurasian continental plates slammed into each other 15 miles beneath the ocean northeast of Japan triggering a magnitude 9 earthquake and a massive tsunami.

Waves up to 128 above sea level washed over coastlines in northern Japan, finally trickling out miles inland.

Japan's confirmed death toll reached at least 15,891 — many people were never accounted for. Analysts put the cost of the catastrophe, including the meltdown at the Fukushima Dai-ichi nuclear power plant, at around \$300 billion.

Amid fears they wouldn't resist additional quakes, authorities pulled other Japanese nuclear plants out of commission. To compensate, they brought decommissioned oil-burning plants back on line.



On March 11, 2011 a massive earthquake and tsunami devastated many parts of Japan, including this region of Ohama Miyato. The country shifted from nuclear power to oil generators, driving up the cost of electricity for Hawaii.

Japan dived head on into Asia's market for low-sulfur oil — the very same fuel Hawaiian Electric Co. needed to power its generators. A desperate nation

was ready and willing to outbid other customers, and the price of that oil nearly doubled. Beginning in 2011, Hawaiian Electric paid between \$124 and \$138 per barrel — a price that would stay in that range for years.

HECO's decision to switch to the low-sulfur oil produced in Asia more than four decades earlier came home to roost. It couldn't simply buy a more affordable type of oil such as that available to other parts of the U.S., according to Alm.

The problem, he says, is that "we were part of the Asia Pacific oil market."

Previous price spikes tended to be linked to geopolitical conflicts, like the Six-Day War or the Gulf War, or other events that had fairly short-term consequences.

"Then you get to the tsunami, and it shot up — and the (price) graph goes straight across for four years," Alm notes. "That altered us dramatically."

At first, customers understood that their electricity costs were going up because of an epic tragedy in Japan.

"But after about six months, you could just see the public kind of turn," he says. "I think one of the things the public was saying was, 'OK, I get it, it is Japan, but how come you guys didn't figure out how to make us less vulnerable to oil?"



The orange line was the price of oil used by Hawaiian Electric to generate electricity before and after the Fukushima catastophe. The blue is Brent crude oil. The disconnect came after Japan began to purchase large amounts of oil that Hawaii bought from Asian markets to repostate most of the alertricity.

In 2011, the cost of producing renewable energy was dropping rapidly with companies in Asia leading the way. The price of rooftop solar panels, for instance, had begun to cascade in 2008 and would fall 85 percent over the next seven years.

Big Wind was <u>starting to look more and more doubtful</u>. The opposition to wind farms on Molokai and Lanai was gaining traction with supporters in the Legislature and state government. Wind farm developers on Molokai had failed to secure the land needed for numerous wind turbines and energy officials began to eye geothermal on the Big Island as another possibility.

Still, Hawaii's renewable energy sector was beginning to blossom.

The Explosion of Solar

In November 2011, Abercrombie signed a deal with Japan to build a smart grid on Maul, a project that South Korea would later join. The Kauei Island Utility Cooperative was moving forward with an \$11-million program to put smart meters in thousands of homes on the Island. Electric vehicles were becoming more common on Oahu as HECO installed EV charging stations in more and more places.

Solar panels were going up on rooftops throughout Oahu, reducing electricity costs for those who could afford the hefty initial purchase, to just a few dollars a month afterward.

In 2011, the Hawaii Legislature <u>helped jumpstart the spread of rooftop solar</u> by allowing homeowners to gradually pay off their systems rather than having to spend tens of thousands of dollars to buy one outright.

"That opened up an entire new market," says Jeff Mikulina, the executive director of the clean energy advocacy group Blue Planet Foundation.



Falling prices and legislative changes made it easier for Hawaii residents to install solar

Hawaiian Electric didn't see it coming at all. In 2007, it had predicted fewer than 400 rooftop solar systems in the islands in 2012. Instead, there were 8,000 homes with rooftop photovoltaic. (By 2014, there would be 40,700.)

Mikulina calls it "the slow contagion of photovoltaic."

That's not "when your crazy uncle off the grid gets it; it is when your neighbor does," he says.

The next two years brought great optimism for the promise of renewable energy in

With the state in better financial shape than when he'd taken office, Abercrombie continued to push for clean energy programs and projects. In 2012, he named Lt. Gov. Brian Schatz as the state's first energy czar, tasking him with overseeing the state's push toward the Hawaii Clean Energy Initiative's goals of 70 percent renewable energy by 2030.

New winds farms on Maui and Oahu began to take shape. In 2012, the Legislature put in place a framework for an interisland cable even as opposition continued from the neighbor islands and the island of Lanai was sold to billionaire tech industry mogul Larry Ellison, suggesting plans for a wind farm there had been abandoned.



The Kahuku wind farm on Oahu was one of the new renewable projects envisioned under the Hawaii Clean Energy Initiative. It began operations in 2011.

Hawaiian Electric continued to seek other renewable projects including biomass, geothermal and even wave technology.

The state became a leader in solar installations, topping the nation in per capita rooftop solar. Jobs in the energy sector brought a welcome boost for the state's economy.

All in all, a thriving market was being created, says Mark Glick, who became the head of the <u>Hawaii State Energy Office</u> in October 2011.

But conflict between the growing solar sector and the state's largest utility soon boiled over

Solar companies wanted to install as much rooftop PV as they could, in large part to take advantage of lucrative federal and state tax credits.

HECO wanted to go slow, unsure what the addition of so much solar power would do to its aging grid. The utility also was, in essence, losing customers as more and more people generated their own power from the sparkling blue panels mounted on their roofs.

Homeowners and solar installers were more and more being asked to foot the bill for studies about the viability of connecting individual systems to the grid, something that could cost a homeowner thousands of dollars.



has seen the renewable energy market blossom in Hawaii.

Alm says part of the problem with rooftop solar was that no one knew how much the system could handle. Each time the utility allowed more rooftop solar into the power system, it discovered it could handle more of it.

"Every time Hawaii increased its load, it set a new record, and Hawaii discovered it could do more," says Alm. "Could the company have moved faster? Probably. Was the company just dragging its feet? ... I think they were being cautious. It had to do with reliability. It didn't have to do with them waking up in the morning and saying, 'I don't like photovoltaics."

Change Isn't Easy

In 2013, the state <u>put limits on the solar tax credit program</u> that had fueled much of the growth in home systems. Some solar companies applauded the move, saying the tax credits had served their purpose. Other companies and some environmental groups cried foul.

HECO began to run into trouble getting its plans through the Hawaii Public Utilities Commission. For the first time, the agency rejected the utility's five-year plan, a process that the company and a panel of dozens of people with an interest in the utility's business had worked on for more than a year. The planning process had cost ratepayers \$11 million.

Some 120 years after Hawaiian Electric Co. had muscled its way into the very fabric of life in Hawaii, after decades of helping steer development and economic growth, the state's largest and some would argue most-influential company appeared to be losing some of its political clout.

And then another political shakeup occurred that would have profound



Then-Sen. David Ige, left, defeated incumbent Gov. Neil Abercrombie in the August 2014 primary. It was one of the biggest political upsets in the history of the state.

In August 2014, a little-known state senator shocked Hawaii's political establishment by beating incumbent Gov. Neil Abercrombie in the primary election. It was nearly unprecedented for a sitting governor to be knocked out in his own party's primary, let alone by an opponent who was virtually unknown to most voters.

Hawaiian Electric executives were early and large contributors to Abercrombie's bid for re-election. Hawaiian Electric Industries CEO Constance Lau, for instance, pitched in \$5,000 to the governor in June 2012. In October 2014, well after the August primary, she gave nominee David Ige's campaign \$1,000, according to state campaign finance records.

In fact, the only Hawaiian Electric executive who supported Ige appeared to be HECO President Richard Rosenblum who gave \$1,000 to Ige's campaign in late July 2014, just days before the Aug. 9 primary. By then, <u>political polis</u> showed Ige with an unbelievably large lead over the incumbent Abercrombie.

Ige took office in December. One of his closest advisers was Robbie Alm, who by then had retired from Hawalian Electric and was working on various projects in the private sector. (Among others, Alm is the president of <u>Collaborative Leaders</u>
<u>Network</u>, a small organization of civic leaders funded by Pierre Omidyar and his wife, Pam. Pierre is the publisher of Honolulu Civil Beat).

But Alm's presence in the governor's office didn't seem to help HECO, especially when it came to the biggest deal in the utility's history — the <u>proposal by a Florida utility giant to buy Hawaiian Electric Industries</u> for \$4.3 billion.



Jim Robo, chairman and CEO of NextEra Energy, and Constance Lau, president and CEO of Hawaiian Electric Industries, announced an agreement for NextEra to take over HEI at a press conference. December 2014.

In December 2014, NextEra Energy and Hawaiian Electric called a press conference to announce the proposal. Within months, the deal was <u>facing stiff opposition</u> from environmental groups and others. The solar industry in particular stood to lose a significant amount of business if NextEra took over and succeeded in reducing costs to ratepayers. The solar companies mounted an aggressive lobbying and public relations campaign against It.

But perhaps the most important opponent was Ige. He was not convinced NextEra's plan for Hawalian Electric was in the best interest of the state and publicly questioned whether NextEra was really committed to Hawaii's renewable energy goals.

Soon after taking office, Ige had appointed former lawmaker Randy Iwase to head the Hawaii Public Utilities Commission. Iwase replaced Mina Morita of Kauai, who had become a favorite of clean energy advocates in her time as commission chair.

The public also wasn't thrilled with a NextEra takeover of Hawaii's utility. Opinion polls, including a <u>Civil Beat poll in February</u>, consistently showed a majority were opposed to the merger.

In a <u>sprawling regulatory process</u> that continued until last month, the Public Utilities Commission led by lwase sought to assess whether NextEra's purchase would be in the public interest and significantly help the company bring its aging systems into the future.



HECO President Alan Oshima was happy to see the end of a months-long hearing process into whether his company could be sold to NextEra Energy of Florida. In the end, the Public Utilities Commission said no.

On July 15, the commission $\underline{\text{rejected the deal}}, \text{saying} - \text{as Ige had contended all}$ along — that NextEra hadn't shown there would be enough concrete benefits for customers and the state.

Ige held a press conference that day to reiterate his own concerns. He described NextEra's position on the state's goal of 100 percent renewable energy by 2045 as "vague and noncommital, to say the least."

"Any merger or investment must align with the state's 100 percent renewable energy goal," Ige said. "We are looking for a partner that shares our hopes and

NextEra paid Hawaiian Electric \$95 million — a "break-up" fee which had been agreed to if the deal fell through — and walked away, also withdrawing from a number of smaller energy projects in Hawaii.

That leaves Hawaiian Electric to go it alone — or perhaps reach a deal with another company. Ige has said others are interested, but he hasn't revealed who.

Local energy advocates including some lawmakers want to see the company split $\underline{\text{into smaller pieces}}$ that would operate local utilities on Maui and the Big Island, much as Kauai does.

Today, HECO still faces profound questions about how to reconcile its aging equipment with the state's ambitious renewable goals without breaking its bank.

How can Hawaiian Electric ramp up its renewable effort and improve its outdated

Next: Hawaiian Electric Co. President Alan Oshima talks about what's ahead for



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