

Maui Electric looks to geothermal

By Edwin Tanji
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KAHULUI — Geothermal power is still the hope for the future for Maui Electric Co. despite opposition of some Hawaiians and residents of the remote Kanaio area and an uncertainty over whether such power is to be found on Maui.

"I would like to know if it is there," said Maui Electric President Arden Henderson. If there is a geothermal resource on the southwest rift zone of Haleakala, he said, "I firmly believe we can produce electricity with geothermal with less adverse effects on the environment than we do now with diesel and steam power."

If it isn't there, Henderson will proceed with planning other power options including upgrading the company's current line of diesel generators.

Henderson over the past decade has looked at dozens of schemes for weaning Maui Electric from its dependence on oil to produce power. The utility now gets from 10 to 20 percent of its electricity from the Hawaiian Commercial & Sugar Co., which produces power by burning bagasse and coal.

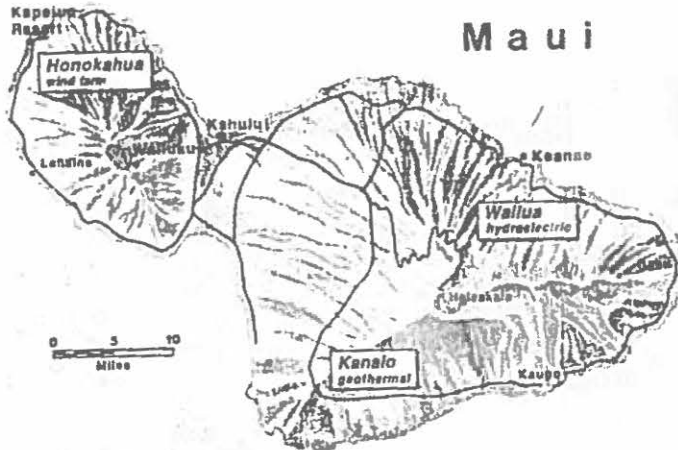
But there are no alternatives as promising as geothermal, in Henderson's mind. Proposals for wind and hydroelectric generation will provide new sources of electricity, but it's not "firm power." If the wind or water stops, there is no power.

"They don't allow us to postpone the installation of any required installed capacity," he said. ("Installed capacity" is the total electricity the utility can produce with the generators that are installed in its plants.)

Biomass in the form of HC&S sugar mills is a proven form of alternative energy. But it is dependent on the economics of sugar.

"We would like to see the biomass capacity increased on the part of HC&S, but given the situation with sugar cane in general, that isn't going to happen. We don't depend on any additional capacity coming from there," he said.

He sees little potential for developing a garbage-to-energy plant on Maui unless the price of oil were to soar to new heights. Trash, which includes unburnable substances as well as unknown potential pollutants, is not an efficient source of power and the cost of using trash to produce power is higher than the cost of using a diesel generator.



"On Maui, we have a problem of not enough garbage to burn to get into the economies of scale," Henderson said.

Attempts to develop alternative energy sources have run into public opposition and financing difficulties. The loss of energy tax credits isn't helping.

A California company, Garratt-Callahan, was proposing a small 2.7 megawatt hydroelectric generator at Wailua on the northeast slopes of Haleakala. But residents of Keanae objected to the plans to divert water from three streams, and an environmental impact statement on the project was rejected by the state Board of Land & Natural Resources.

(A megawatt is 1,000 kilowatts. An average Maui home uses 500 kilowatt hours a month or 6,000 kilowatt hours a year. The 2.7-megawatt plant was expected to produce 7.9 million kilowatt hours a year, enough for roughly 1,300 homes.)

On the other side of Maui, Zond Systems, Inc., also of California, was proposing a 10-megawatt wind farm at Honokahua above the Kapalua Resort. But the project was unable to attract investors and appears to be in limbo.

For Zond, the state of limbo may be disastrous. The project was based on a contract with Maui Electric to be operational by the end of this year. Under the contract, Maui Electric would pay Zond 7 cents a kilowatt hour for avoided cost (the

cost of not using oil to produce power.) By comparison, Maui Electric is now paying HC&S about 3 cents a kilowatt hour.

Henderson said Maui Electric is reviewing the Zond contract. If it lapses, the company loses the 7 cents guarantee and a major incentive for building the wind farm.

Conversely, despite the opposition of residents and the lack of tax credits, the principals involved in geothermal development on Maui are still interested, Henderson said.

True-MidPacific Geothermal Venture is waiting for Maui County to develop rules and regulations over geothermal development. A proposed ordinance is expected to go to the Council early in 1987. Possible well sites are being leased from Uiupalukua Ranch, with Maui Electric promising to buy up to 13 megawatts of geothermal power if it is developed.

"The developer tells me when that set of regulations is approved on Maui, they would immediately apply for exploratory drilling," Henderson said.

He said he understands the True Geothermal Energy Co. of Wyoming has adequate capital to finance the venture, along with plans for projects on the Big Island.

"They are looking at this on a long-term basis," he said, even with costs of exploratory drilling estimated to run up to \$4 million.