

Speak up now on clean-energy grid plan

(Honolulu Star-Advertiser "Views and Voices" Article, April 19, 2023)

By Clint Churchill and Ed MacNaughton

With little due diligence, the 2015 Legislature passed a law mandating that 100% of our electricity come from renewable resources by 2045. Good progress to date, but how will we get, on Oahu, from 29% renewable energy today to the required 100%? In a thorough four-year process, Hawaiian Electric (HECO) developed an "Integrated Grid Plan" (IGP) which addresses this question. But is the plan practical? Reasonably achievable? Affordable? The public has been given until April 21st to provide input.

The plan shows achieving 100% renewable on the Big Island and Maui may well be feasible, but with one glaring shortcoming; how can reliable electricity, primarily from intermittent solar and wind, be achieved with only 3.1% of the power mix coming from biofuel and hydro-electric? Shouldn't the plan provide a backup source of dispatchable power—perhaps in the range of 15%?

A much bigger problem, though, looms on Oahu. Oahu has a much larger population, limited land and conflicting land-use policies, and more than 70% of electricity demand coming from non-residential customers (Waikiki, military bases, industrial activities, offices, etc.). How to get to 100% renewable energy is a perplexing challenge.

The 100% renewable law leaves the Public Utilities Commission (PUC) and HECO no choice but to try to carry out the directive, showing ever-decreasing fossil fuel slices of the generation mix each five years. The IGP provides a "preferred generation mix," but what does this reveal?

Shockingly, 25% of Oahu's power is planned to come from *offshore windmills* by 2035. Yes, either giant floating windmills or windmills sprouting from the ocean floor around Oahu. Perhaps HECO is drawing from a 2021 federal feasibility study that remarkably references floating windmill hubs 541 feet above sea level with blade tips reaching higher than a 90-story building. And one of the study's three

potential sites: “an eastern site off Kailua that nearly reaches Molokai.” Egad. Is this the visual environment and potential marine impact we want for our future?

The report further states that Oahu “will need nearly 3,200 megawatts (capacity) of large-scale solar generation by 2050 built on 20,700 acres of land.” This is equivalent in area to a one-mile swath of land reaching from Diamond Head to the Turtle Bay Resort. We ask, shouldn’t that amount of land be left available for future residential development or sustainable agriculture? The report sensibly provides a land-constrained plan, but at even half of the “needed” level, is this the future we want for Oahu?

Another major concern pertains to customer-based solar, either residential rooftop or business sited. The progress from 14.1% of the generation pie in 2022 to 18.2% in 2040 seems reasonable. But the land-constrained plan *more than doubles* customer-based solar between 2040 and 2045. Is this startling jump wishful thinking just to meet the 100% mandate?

The report also brings light to the “hidden cost” of 100% renewable, stating that an “investment of \$1.33 billion through 2035 to expand or create new transmission interconnection points between renewable projects” will be required. Ratepayers will get to repay the \$1.33 billion to HECO plus a rate of return—in addition to \$500 million for the Kapolei battery farm, with neither project generating *any* electricity. The words “increasing the financial burden on our citizens” come to mind.

In summary, it appears to us that, combining the likely unacceptability of ocean-sprouting windmills, excessive land requirements for large-scale solar, and the questionable assumption of doubling customer-based solar after 2040, there is a substantial 40% source-of-power gap to reach 100% renewable energy on Oahu. While it is obvious to us from the IGP that 100% renewable energy is impractical for Oahu, readers should weigh in with their own concerns by Friday, April 21st. And hopefully our legislators will be watching and listening as well.

We encourage readers to go online to hawaiipowered.com/igpreport--your voice is important to our energy future.

Retired businessmen Clint Churchill and Ed MacNaughton represent the Practical Policy Institute of Hawaii

VIEWS & VOICES

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The plan shows achieving 100% renewable on the Big Island and Maui may well be feasible, but with one glaring shortcoming: How can reliable electricity, primarily from intermittent solar and wind, be achieved with only 3.1% of the power mix coming from biofuel and hydroelectric? Shouldn't the plan provide a backup source of dispatchable power — perhaps in the range of 15%?

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ISLAND VOICES



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