Integrated grid plan faces challenges of cost and reliability

(Honolulu Star-Advertiser "Island Voices" Article, June 22, 2023)

By Clint Churchill and Ed MacNaughton

In a May 21, 2023 Star Advertiser editorial about the Hawaiian Electric Co.'s final Integrated Grid Plan (IGP), mention was made of 100 pages of comments from more than 300 community members. Great! But what was the nature and significance of these comments, HE's response, and updates to the draft IGP?

In her video transmittal of the final IGP to customers, HECO president and CEO Shelly Kimura stated, "We heard that affordability and reliability are the top concern and interest to our customers." Interesting that there was no mention of the third corner of the energy pyramid, "green" power.

Two substantive issues arose during the IGP process. First, HECO wisely recognized that 20,000 acres for utility solar farms may not be workable due to competing land use priorities, cost considerations, permitting issues, and community pushback. Thus, a land-constrained scenario reduced projected solar farm power generation in 2045 from 53% of total generation to 21%--a significant 32 percentage point swing.

Second, community pushback to large offshore wind farms was significant, with the final IGP citing "numerous public comments received in regards to offshore wind." In addition, the IGP's Technical Advisory Panel astutely noted "the high degree of technological, cost, and regulatory/siting uncertainty for future offshore wind development" and thus the need for the source-of-power mix to exclude offshore wind. HECO responded with a scenario in which the 22% of energy production from offshore wind in the 2045 base plan goes away.

But where will the energy come from to make up for the combined 54 percentage point differential? First, an assumption that HECO will burn costly biofuel as a source of power generation—up from 3% to 18% of the total. Second, a startling assumption that customer-based solar will comprise 55% of Oahu's energy needs

in 2045 vs. 17% in the base plan. Is this because there was no other viable option to meet the Legislative mandate away from fossil fuels? Simply a place-holder?

Currently, 37% rooftop penetration equates to just over 14% of total electricity generation. We should absolutely continue to encourage more rooftop solar panels in already-urbanized Oahu. But even assuming an unlikely doubling of rooftop penetration, this would amount to 28% of total generation. How could this percentage possibly increase to 55%? Is this a hot potato where HECO, for lack of a better alternative, punts the challenge of 100% renewable energy to its ratepayers? As if to say, "Here, you do it, there must be room on your rooftops for more solar panels." How could that possibly be called planning?

One commentor to the draft IGP said it well: "This plan seems overly dependent on distributed energy resources. Hawaii already has a huge problem with the cost of living, worsened by a high percentage of low-income households. These people cannot afford to invest in these future energy systems."

The final IGP now goes to a PUC docket with a year or so of hearings, intervenors, debate, etc. Both HECO and the PUC will have to do their constrained best, given state law. But it appears to us that the overriding problem, for Oahu, is the practicality of the all-or-nothing 100% renewable mandate.

Could the State Energy Office possibly shine the spotlight on this disconnect? 2022 Act 238 calls for a report to the Legislature, by this year-end, on decarbonization—a huge task with many elements beyond electricity on Oahu. Notably, Act 238 includes language as to whether adjustments to decarbonization goals should be recommended; perhaps this is an opportunity for the Energy Office to communicate to the Legislature the impracticality of 100% renewable energy for Oahu.

Climate change is real and we should decarbonize to the maximum extent practical. But for how many more months and years will our Legislature place a higher priority on making an infinitesimal dent in the world's CO2 vs. the cost and reliability of electricity for our people?

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

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