

CLEANER ENERGY

RENEWABLES: REENERGIIZE OR REVISE?

Given what's learned, maybe time to revise '100%' policy

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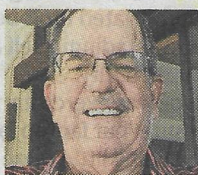
We need to do everything practical to address the reality of climate change. The time seems right to assess the challenges that have emerged since the state's 2015 "100% renewable energy by 2045" goal and law — primarily Oahu challenges:

1. Rooftop solar won't get us anywhere near 100% renewable. Oahu's nation-leading 37% rooftop penetration is great, but customer-sited solar amounts to less than 14% of electricity generation. Even with the unlikely doubling of rooftop solar, combined with HPOWER and existing wind farms, we will still need a staggering 65% from other sources to achieve 100% renewable.

2. Utility solar farms would require significant acreage. To achieve the referenced 65%, at least 20,000 acres for utility solar farms would be required on Oahu. As a point of reference, there are about 22,000 acres in crops on Oahu.

3. Utility solar farms plus utility battery farms are clearly cost prohibitive. The under-construction Kapolei battery farm, which is projected by Hawaiian Electric to cost ratepayers \$500 million over the next 20 years, will generate no power and store less than 3% of a day's demand. Will it take more than 20 of these farms and \$10 billion to assure reliable electricity for just two overcast days?

ISLAND VOICES



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4. Utility-scale wind farms on Oahu are all but dead. Windmills are problematic due to the visual blight, health concerns and strong pushback from rural communities. Former state Sen. Gil Riviere summarized it best: "We must stop forcing massive wind turbines on small disadvantaged communities."

5. 100% renewable energy is a trade-off conundrum between green and affordable. Picture an energy generation pyramid, with the tip labeled "dependable," the lower right corner "affordable," and lower left "green." As S&P Global analysts perceptively observed, "it appears that the choice is any two." Of the hoped-for green and reliable alternatives, hydrogen is cost-prohibitive and CO2-emitting biofuel/biomass depend on controversial rationale. While reliability is essential, green energy and affordable energy are conflicting priorities.

So what should Gov.-elect Josh Green and the Legislature do?

1. Treat the cost of energy with a greater sense of urgency and priority. Achieving anywhere near 100% renewable energy will be hugely expensive to Oahu residents for an infinitesimal effect on world temperature. Isn't it time to put the needs of our people first?

2. Stumbling blinders-on to 2045 will require a huge commitment of land on Oahu for utility solar farms. Affordable housing is perhaps the new governor's top priority. More homes must be built on available land — but won't current energy policy, which will necessitate utility solar farms, be counter-productive to solving our No. 1 problem?

3. Adopt policies and subsidies to encourage installation of solar in already urbanized areas of Oahu. While continuing to encourage rooftop solar, shouldn't we incentivize and accelerate the development of nonresidential solar on Oahu land already urbanized? Shouldn't there be elevated solar panels covering every parking lot of every shopping center? And every industrial building rooftop?

4. Collaborate with the military services to achieve common energy goals. Each major base has considerable land area suitable for more solar projects — underutilized land, exchange and commissary parking areas, rooftops, and more. The state and the U.S. Department of Defense have a common goal to decarbonize, so why should the military default to land-gobbling, off-base projects for their power?

5. Be open-minded to a major option taken off the table in 2016: liquified natural gas (LNG). LNG was proposed by Hawaiian Electric in 2016 as a cleaner, lower-cost fuel and important in the transition to 100% renewable. Customer savings were estimated to be as much as \$3.7 billion over 30 years, depending on future commodity prices. But

learning of Gov. David Ige's opposition, HECO withdrew the proposal. Ige had stated: "It's time to focus all of our efforts on renewables — we will oppose the building of LNG facilities."

Is this still a sensible policy considering the significant lessons we've learned since? It is instructive to note that almost every Caribbean country and territory depend on LNG for much or all of their power. And it is also worth noting Matson's recent \$1 billion order for three LNG-powered container ships.

In summary, perhaps it's time to consider a revision to energy policies to assure a future for our people that is practical and affordable, yet largely decarbonized.