

From: [REDACTED]
Sent: Tuesday, October 29, 2019 1:38 PM
To: General Plan
Subject: BioEnergy

Aloha County of Hawaii Planning Commission, The following, (quoted below) statement on pg. 81 (Strengthening Energy Diversity) Policy no. 270, says:

"Promote Biomass energy and fuel production using wood chips from exotic/invasive trees."

THAT quote needs to be totally deleted / eliminated from the County Plan, (NOT EDITED) for the following reasons:

* State and County governments' duty and responsibility is to serve and protect the public's health, safety and public trusts - NOT to "PROMOTE" a specific business or industry, and Not to "Promote" the private-profit seeking ventures of private businesses, industries, and investors.

* Biomass Energy (as it is currently being attempted by Hu Honua / Honua Ola) is NOT CONSISTENT with the Hamakua Community Development Plan.

* Biomass Energy (as it is currently being attempted by Hu Honua / Honua Ola) is NOT CONSISTENT with Hawaii County's Declaration of Climate Emergency. * Biomass Energy (as it is currently being attempted by Hu Honua / Honua Ola) is NOT CONSISTENT with Hawaii County's Declaration of Climate Emergency.

* Biomass Energy (as is currently being demonstrated by Hu Honua / Honua Ola) is NOT cost effective and WOULD increase energy costs for ALL consumers. The \$.22 PER KWH cost, demonstrated in the purchase agreement with Hawaii Electric is TWICE the cost of SOLAR and also SIGNIFICANTLY higher than Solar WITH Storage. (That purchase agreement and the PUC's handling of it are currently being litigated.) (See additional comment regarding costs below)

* It has been demonstrated and proven that Biomass Energy (as it is currently being attempted by Hu Honua / Honua Ola) is extremely inferior to other forms of energy:

Hu Honua has promoted itself as "Clean Energy" HOWEVER:

Hu Honua will burn close to 20,000 acres of Eucalyptus plantation trees at a time when the IPCC tells us that the most important thing we can do to mitigate the impending catastrophe of Climate Change is plant more trees in order to sequester greenhouse gasses.

Burning wood emits 1.5x more greenhouse gasses than burning COAL in producing equivalent electricity (per KWH). (IPCC Taskforce on Greenhouse Gas Inventories (2006) and Laganieri et al. (2017))

Burning Wood emits 3x more greenhouse gasses than burning natural gas and approximately 2x more GHG than burning naphtha (the fuel for Big Island's largest electricity plant). (IPCC Taskforce & Laganieri (as above)) Hu Honua / Honua Ola will emit 300,000 TONS of greenhouse gasses per year. This is more than 1,000 tons of GHG per day. (Hu Honua Clean Air Permit Application - Greenhouse Gas Addendum)

A Government of Canada computational tool shows the cumulative Greenhouse Gas emissions from cutting, burning and regrowing trees to be worse than burning coal until at least 50 years after the initial harvest (factoring in the transport distance from Waiakea, Pahala and Hamakua Eucalyptus plantations and modeling rapidly growing Canadian trees, though understanding that the Big Island trees grow more rapidly.) This is 'best case' scenario, 50 years to achieve parity with coal. More likely, accumulation of GHG from burning wood would be worse than burning coal indefinitely.

See: < bioenergy greenhouse gas calculator > <https://apps-scf-cfs.rncan.gc.ca/calc/en/bioenergy-calculator>
The EPA attempted to declare bioenergy to be "greenhouse gas neutral". The EPA then requested endorsement of this policy twice from its Science Advisory Board (SAB), in 2014 and again in 2017. On both occasions the SAB refused endorsement.

Hu Honua's prospective fuel-source trees have been growing for over 20 years. Their harvest cycle will be every 7 years. This offers no chance to even approach carbon neutrality.

Further Extrapolating this example - Kamehameha Schools, owner of the HH / HO fuel-source trees, has indicated that the first 3,000 acres of trees harvested will not be regrown in deference to 'other uses'. Again, this makes carbon neutrality and 'green energy' a moot talking point. THUS the sustainability of biomass/fuel electrical generation is NOT CERTAIN.

Thank you



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