

**ARCHIE NAHIGIAN  
P. O. Box 631405  
Lana'i City, Hawaii 96763**

February 28, 2011

Dept. of Business, Economic Development & Tourism  
Strategic Industries Division/Renewable Energy Branch  
P. O. Box 2359  
Honolulu, HI 96804

ATTN: Allen G. Kam, AICP, HIREP EIS Manager

Dear Mr. Kam:

I attended the February 5, 2011, meeting on Lana'i pertaining to the Hawai'i Interisland Renewable Energy Program: Wind – Environmental Impact Statement. Although I did not provide oral testimony, I share the concerns expressed by many at that meeting regarding the various adverse environmental impacts of the proposed project. I am attaching to this letter a copy of my November 24, 2008 letter expressing concern about six (6) areas of adverse impact and damage identified in the Findings and Conclusions section of the Environmental Assessment/Environmental Impact Statement Preparation Notice for the Lana'i Wind Farm Project dated September 19, 2008. As those concerns remain unaddressed, I request that this attachment be incorporated as part of my scoping meeting comments.

Multiple meetings have been held on Lana'i about this issue since David Murdock first publicly proposed the idea in August 2007. Since that time, it has been virtually impossible to obtain specifics regarding the costs and parameters of the project from either Castle & Cooke or from State officials. It is my understanding from the February 5<sup>th</sup> meeting that all questions and comments will be answered, so hopefully this effort will prove helpful in finally establishing a universe of actual facts from which we can all then proceed to evaluate whether the economic and environmental costs of the proposed project are justified by whatever benefits it may offer.

In order to facilitate your responding to my questions, I will endeavor to keep the questions short and specific. I will offer some comments where I feel it may be necessary to help ensure that you properly understand the focus and intent of the question to enable you to provide a fully responsive answer. The questions are in no particular order as I consider them all important to the cost/benefit analysis that must be completed before additional taxpayer and ratepayer funds are spent on this proposed project.

1. The HIREP website references "the Hawai'i Clean Energy Initiative's goal of achieving 70 percent clean energy by 2030 with 30 percent from efficiency measures and 40 percent coming from renewable energy sources." It is my understanding this is a voluntary goal, so there is no legal obligation to achieve it and no penalties should it not be achieved. I am unable to locate any substantiation on the website for how those numbers were arrived at. Why was it determined that we should wait 20 years to achieve these goals, and why only 70 percent clean energy? Why not 100% clean energy, and why not today? Were the numbers based on an evaluation of various renewable energy resources available and the comparative costs of developing each of them or were they taken out of thin air?
2. Referencing Question 1 above, are those percentages based on 2008 energy consumption amounts, when the voluntary goals were established, or on 2030 consumption amounts? The estimate I have heard is that the proposed Lana'i wind turbine project would supply 10% of Honolulu's energy needs. Is that 10% figure accurate, and is that 10% of Honolulu's energy needs in 2008 or in 2030?
3. The HIREP website states that "wind power has been identified as the most commercially available and economically viable option at the present time." This statement is repeated in the Department of Energy Notice of Intent to Prepare a Programmatic Environmental Impact Statement for the Hawai'i Interisland Renewable Energy Program: Wind (DOE/EIS-0459). Please provide all documentation to support this "identification" including, but not limited to, when the identification was made, the factual basis upon which the identification was made, and names and affiliations of all parties involved in making the identification.
4. The DOE/EIS-0459 Notice referenced in Question 3 above also states that "(t)he Island of O'ahu....does not contain sufficient renewable energy potential to meet the HCEI's goals." Please provide all documentation to support this "conclusion" including, but not limited to, when the conclusion was made, the factual basis upon which the conclusion was made, and the names and affiliations of all parties involved in contributing to the conclusion.
5. The HIREP website references an "early estimate of \$800 million to \$1 billion" as the cost for the interisland cable. Please update this estimate with the current cost projections, including separately any and all financing costs over the life of the project. Please also specify all parties who will be responsible for paying the costs of the cable installation, maintenance and repair together with their respective shares.

6. The HIREP website states that "projected savings from not having to buy imported oil over a 20-year period is estimated to be approximately \$5.7 billion." Please explain how such savings will be achieved and who will benefit from the savings. While taxpayers and ratepayers would not be paying for imported oil, they will have paid billions of dollars to install the wind turbines, the undersea cable and the upgrades to the grid, and they will be continuing to pay for these items, and interest on the debt to foreign countries, through increased electric rates and taxes.
7. Please provide the estimated cost of each aspect of the proposed project (cable, wind turbines and utility infrastructure upgrades), including the amounts that U.S. taxpayers, State of Hawai'i taxpayers and Hawaiian Electric Company ratepayers will pay over the same 20-year period (including any and all financing costs) to David Murdock, non-resident owner of Castle & Cooke, and to Hawaiian Electric Company, together with the interest to be paid on the debt to foreign countries for taxpayer funds borrowed and spent on the project. Please also advise what percentage of Hawaiian Electric Company's shareholders are non-residents, as there should be no expectation that the profits going to David Murdock or non-resident Hawaiian Electric Company shareholders will be spent in Hawaii. The facts you provide in response to this question should either confirm or dispute the further unsubstantiated statement on the HIREP website claiming that the proposed project "will enable much more of that money to remain in our local economy, covering the cost and more of the interisland cable."
8. According to HIREP's website, over 63% of Hawai'i's imported oil "is for transportation," with less than 30% being used to produce electricity. How will the proposed wind turbine project reduce Hawai'i's dependence on imported oil used in transportation? Also, what conservation and energy efficiency plans have been implemented or are being planned to reduce use of imported oil in transportation, which is where nearly two-thirds of imported oil is consumed.
9. Electricity generation from wind is generally considered an unreliable source of energy because it is intermittent, volatile and largely unpredictable. It requires additional reserves of conventional energy and increases grid instability. Please disclose how many barrels of imported oil you project the proposed project will save and precisely where those savings will be made.
10. According to a September 14, 2009 article in The Honolulu Advertiser, Honolulu pledged in 2007 "to reduce the city's power consumption by 10% by 2017." The city's electricity consumption actually increased nearly 15 percent during the first two years following the pledge, according to the article. Please provide the figures for O'ahu's annual energy consumption from 2008 to the present and projections for such annual consumption for the life of the proposed wind turbine project.
11. Please disclose what efforts have been made, and taxpayer and/or HECO ratepayer funds expended, to evaluate and implement alternative renewable energy sources available including, but not limited to, solar, geothermal, biomass, ocean thermal energy conversion and wave. Please also disclose what efforts have been made, and taxpayer and/or HECO ratepayer funds expended, to evaluate and determine how a potential combination of several such

renewable energy sources would help achieve Hawai'i's energy goals more quickly, at less cost and with far less environmental damage than the proposed wind turbine project.

12. Please disclose the total amount of taxpayer funds from all sources that have been expended to date by Federal and State officials in promoting, or in any way pertaining to, the proposed wind turbine project. This should include, but not be limited to, the personnel time, travel, lodging and meal expenses of officials attending meetings such as the recent scoping meetings financed by taxpayers through the American Recovery and Reinvestment Act (ARRA).
13. Please disclose the total amount of ratepayer funds HECO has expended to date in promoting, or in any way pertaining to, the proposed wind turbine project.
14. Please disclose the total amount of all taxpayer funds including, but not limited to, Federal and State tax credits, direct cash grants, loans and any other form of benefit projected to implement and finance all aspects of the proposed wind turbine project over its projected useful life.
15. Please disclose the total amount of HECO ratepayer funds projected to be spent on implementing and paying for all aspects of the proposed wind turbine project over its projected useful life.
16. Federal taxpayer benefits referenced in Question 14 above will likely be financed by China, as this nation's largest creditor. Please disclose the projected interest on the additional federal debt stemming from the proposed wind turbine project that the taxpayers of Hawaiian and all the United States will pay to China over the projected life of the proposed wind turbine project.
17. According to Forbes Magazine, David Murdock, owner of Castle & Cooke, has lost \$2 billion, or over 40%, of his net worth over the past 3 years. During that same period, in order to reduce operating expenses, David Murdock's Castle & Cooke has fired several hundred of its employees on Lana'i, closed the island's only public swimming pool, closed the island's only public fitness center, and closed the island's only movie theater. (The two Four Seasons hotels on Lana'i, which Murdock owns, have each maintained their swimming pools and fitness centers for hotel guests.) Please advise what contingency plans and protections State planners have established to recover the investment of taxpayer funds in this project should David Murdock and Castle & Cooke become insolvent before the proposed project could be completed, during the proposed construction timetable or at any point during the projected useful life of the proposed project.
18. The cost of all facets of the proposed wind turbine project has been estimated from \$3 billion to more than \$5 billion. The Kahe Wind Farm proposed for Oahu, and rejected by Oahu, would have provided 39MW at a reported cost of \$70 million. The Kahuku wind farm is projected to provide 30MW at a reported cost of \$117 million. Using the projected costs of the Lana'i wind project suggests the proposed Lana'i project is at least 5 times more costly per MW than the wind projects on O'ahu. Please explain this disparity as it would seem to argue that constructing several smaller wind projects on O'ahu is far more cost effective.
19. Please disclose the additional cost to the environment including, but not limited to, the additional greenhouse gases produced and additional fossil fuels consumed by (i) manufacturing the wind turbines overseas, presumably in China,

- (ii) transporting them to Lana'i, (iii) harbor construction to accommodate the turbines, (iv) construction of haul roads, (v) construction of the cement batch plant, (vi) erection of the wind turbines and (vii) installation of the undersea cable. This should include all direct and indirect fossil fuel consumption of the projected 2-300 temporary workers to erect the wind turbines.
20. The intermittent nature of wind-generated electricity guarantees that the wind turbines can never produce 100% of their "rated capacity," or their ability to produce electricity under ideal conditions. The buildup of dead bugs and salt can reportedly reduce wind turbine output by up to 30%. Additional energy produced will be lost in transmission by the undersea cable and through inefficiencies in the grid. If the proposed Lana'i project is projected to have a rated capacity of 200 MW, please disclose what percentage of the rated capacity you anticipate the usable output actually delivered to, and usable on, O'ahu will be.
  21. In 2004, The Electric Power Research Institute reported that "waves off O'ahu could produce 100% of O'ahu's total electrical demand." HECO studies have also found that MECO and Hawaii Electric Light Company on the Big Island have experienced "grid instability and other reliability problems due to the high amount of intermittent renewable energy on those islands." Please comment on how these statements seem to contradict HIREP claims on the need and workability of the proposed Lana'i wind turbine project.
  22. I have read that the USA's nuclear reactors are currently responsible for 70% of the power generated from non-greenhouse gas producing sources including wind, solar and hydroelectric. Please advise what evaluation has been made and the cost/benefit analysis of utilizing nuclear power to help address Honolulu's energy consumption.
  23. A recent IBM advertisement claimed that 50% of renewable energy is lost due to inadequacies and inefficiencies in the grid. I have heard fixing the grid could produce energy savings of 20%. How much total electricity is now lost, or unable to be accepted, by HECO due to inadequacies and inefficiencies in their grid?
  24. Please disclose (i) the number of USA citizens who would lose their jobs, (ii) the amount of revenue that would be lost to USA companies or their overseas affiliates, and (iii) the tax revenue that would be lost to the State and Federal governments if the infrastructure that currently supplies imported oil to Hawai'i is displaced by the proposed Lana'i wind turbine project.
  25. According to the U.S. Department of Energy's Energy Information Administration, in 2007 Federal subsidies for wind power reached \$23.37 per megawatt-hour. That subsidy is 15 times more than nuclear at \$1.57, more than 25 times geothermal at \$0.92 and nearly 100 times more than natural gas and petroleum liquids at \$0.25. What evaluation has been done of more cost effective solutions to Honolulu's energy problem?
  26. What analysis has been done regarding the potential energy savings from reducing Hawai'i's dependence on imported food? How much petroleum could be saved by growing more of our food supplies locally instead of importing them?
  27. I have read that saving energy costs about half as much as producing it. It has been reported in the press that the University of Hawai'i-Manoa, HECO's second largest customer, plans to reduce its energy consumption by 50% by 2015. It

has also been reported in the press that the Department of Defense, HECO's largest customer, reduced its energy consumption at Pearl Harbor by 20% in one year after energy briefings on conservation. These examples suggests that the Hawai'i Clean Energy Initiative was both timid and misguided in its goal-setting of 70 percent clean energy by 2030 with 30% coming from efficiency measures and 40% coming from renewable energy sources. Simply shifting those percentages from 40% from efficiencies and 30% from renewable energy sources would likely save taxpayers and ratepayers billions of dollars, reduce Hawai'i's energy footprint and totally eliminate the perceived need for a wind turbine project on Lana'i.

28. I have been told that the 20-year projected life span of the wind turbines is more likely to be 10-12 years when the turbines are located near salt water, as they would be under the proposed Lana'i project. What is the projected life span of the proposed Lana'i wind turbines?
29. What will the additional costs of fire and police protection be for the wind turbines and for the 2-300 temporary construction workers, many of whom are likely to be imported onto Lana'i.
30. How much tourism revenue have you projected Lana'i will lose due to the wind turbines?
31. The entire costs for all components of the proposed wind turbine project will ultimately be paid by taxpayers and ratepayers. As the cost of wind-generated electricity is more expensive than other forms of conventional or renewable energy sources, by what percentage do you project HECO's ratepayers will see their electric bills increase as a direct result of the proposed wind turbine project on Lana'i.
32. What will be the additional consumption of imported oil and the additional cost to ratepayers of HECO providing and maintaining the backup power that will be required to balance the intermittent and volatile output from the wind turbines?
33. Credit Suisse has projected that the USA's dependence on imported oil will be reduced by up to 60% by 2020 based on domestic shale natural gas and shale oil reserves from the Bakken, Eagle Ford and Green River formations. It is my understanding that while some of these reserves were known, cost effective extraction methods had not been developed when the Lana'i wind turbine project was originally proposed nearly 4 years ago. I saw a televised news report last week that the Green River Formation alone, where oil can be extracted at a cost of \$30 per barrel, contains oil reserves four times greater than those of Saudi Arabia. Please address how a combination of cheap domestic oil, conservation efforts and a few smaller wind turbine projects on O'ahu, thus obviating the need for a \$1 billion undersea cable, might be a more logical and cost effective solution to Honolulu's energy consumption.
34. A January 2010 news item reported that Honolulu's HPower, a facility that converts waste into energy, was being expanded to increase its processing capacity to 900,000 tons per year and its output to 84 megawatts. How does the cost per megawatthour of that facility compare to the projected cost per megawatthour of the electricity produced by the proposed Lana'i wind turbine project? Also, what is the cost savings from simultaneously disposing of the

waste while generating electricity, and what is being done to develop such converting facilities on all the islands of Hawai'i?

35. How much has the proposed Lana'i wind turbine project actually increased our dependence on imported oil and hindered Hawai'i's efforts to achieve its voluntary clean energy goals? This analysis should include the time, energy and taxpayer and ratepayer money that has already been spent on all facets of this project over the nearly 4 years since it was proposed. The analysis should also consider the energy savings Hawai'i residents would already be enjoying had that time, energy and money been invested in more concrete and immediate energy-conserving efforts and renewable energy production through installation of residential and commercial solar water heaters and other projects where the residents of Hawai'i would be the direct and primary beneficiaries, rather than David Murdock and HECO.

I believe that the virtually pristine landscape of Lana'i should not be desecrated by the construction of massive wind turbines unless a compelling case can be made (i) that the practicality and enormous additional taxpayer and ratepayer costs of producing the electricity on Lana'i and transporting it to O'ahu can be justified economically and (ii) that all other conservation and energy-producing alternatives, and combinations thereof, have been fully evaluated and are absolutely unable to satisfy reasonable energy consumption levels for Honolulu. The above questions, which remain unanswered after nearly 4 years of meetings and discussions, make clear that such a compelling case has not been made.

Thank you for your consideration.

Sincerely,

A handwritten signature in cursive script that reads "Archie Nahigian". The signature is written in dark ink and is positioned above the printed name.

Archie Nahigian

Enclosure: as stated

November 24, 2008

Mr. Rodney Funakoshi  
Castle & Cooke Resorts, LLC  
100 Kahelu Avenue, 2<sup>nd</sup> Floor  
P. O. Box 898900  
Mililani, HI 96789-89001

Dear Sir:

I have reviewed the Environmental Assessment/Environmental Impact Statement Preparation Notice for the Lana'i Wind Farm Project dated September 19, 2008, and I wish to be considered a "person of interest" relative to this proposed project.

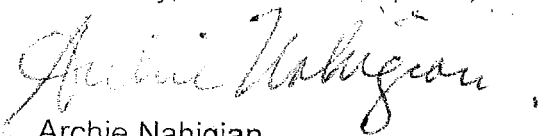
The "Findings and Conclusions" section of this document states that "the proposed Lana'i Wind Farm project may have potentially significant adverse impacts." Some of the potentially significant adverse impacts of particular concern to me known at this time and as outlined in the document that are likely to be caused by the transport, erection and operation of the wind turbines and the marine cable to transport the energy generated to Oahu include the following:

1. Damage to "cultural habitat for several endangered vegetative species" that occur within the proposed project area;
2. "Impacts to coral reef and other sensitive coastal resources could occur through disturbance from marine cable installation;"
3. Damage to up to 22 listed endangered, threatened or species of concern of birds and marine wildlife including humpback whales, spinner dolphins and nesting sites for sea turtles and monk seals;
4. Adverse impact on cultural resources on Lana'i;
5. Adverse impact of temporary construction-related noise and of permanent operations-related noise on marine wildlife and birds; and
6. Adverse visual and aesthetic impact of the wind turbines themselves and of the lighting atop them on sensitive viewing areas and special land use areas.



The public meetings held to date by Castle & Cooke on Lana'i and the information disseminated by it have thus far raised more questions about this proposed project than they have answered. I remain hopeful that as the process unfolds the actual facts and impact of this proposed project will be widely shared with the Lana'i community, as they would be the most affected by it, so that a legitimate determination can be made as to whether or not this project merits being granted the necessary government permits to proceed.

Sincerely,



Archie Nahigian  
P. O. Box 631405  
Lana'i City, HI 96763  
808-565-9009

cc: Mr. Brian Takeda  
Mr. Joshua Strickler

