



November 6, 2009

Theodore E. Liu, Director  
Department of Business, Economic Development & Tourism  
P.O. Box 2359  
Honolulu, Hawaii 96804

Re: ICF International: Proposed Greenhouse Gas Reduction Work Plans

Aloha Director Liu,

My name is Henry Curtis and I am the Executive Director of Life of the Land, Hawai`i's own energy, environmental and community action group advocating for the people and `aina for almost four decades. Our mission is to preserve and protect the life of the land through sound energy and land use policies and to promote open government through research, education, advocacy and, when necessary, litigation.

"Proposed GHG Reduction Work Plans for Hawaii"<sup>1</sup> (September 30, 2009) was written by ICF International for DBEDT. The report could have been written by DBEDT, since it is a mirror image of DBEDT's values and beliefs.

When other state agencies have different ways of looking at issues, ICF mirrors DBEDT's position. For example, the Hawaii Public Utilities Commission (PUC) has opened a regulatory proceeding to analysis whether the utility planning framework needs to be updated. The PUC's consultant, the National Regulatory Research Institute ("NRRI") filed written comments in the docket on November 3, 2009: "The ...process should ask questions broad enough to avoid focusing on a single outcome (e.g. should HECO build an interisland transmission cable?), but focused enough to empower decisionmakers to solve the problems they face. A better question is 'What actions must Hawaii take to be prepared

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<sup>1</sup> <http://hawaii.gov/dbedt/info/energy/greenhouse/>

under a variety of potential futures, to supply its energy service needs cleanly, reliably, and at reasonable cost?"

However, ICF Report adopts the DBEDT position: "A new transmission link, using an undersea cable, is assumed to be built ...For modeling purposes it is assumed that the addition of this facility will cost about \$1 billion to build; assuming \$700-900 million for the undersea cable plus the cost of land based infrastructure on each end. ...All of these figures are estimated based on discussions with DBEDT as engineering studies have not been completed to-date or are not yet public." (pg 128)

One contentious issue is biofuels. Achim Steiner, Executive Director, United Nations Environment Programme (October 2009) noted: "Biofuels are a subject that has triggered sharply polarized views among policy-makers and the public. They are characterized by some as a panacea representing a central technology in the fight against climate change. Others criticise them as a diversion from the tough climate mitigation actions needed ...Above all the [United Nations] report spotlights the complexity of the subject and indicates that simplistic approaches are unlikely to deliver a sustainable biofuels industry"<sup>2</sup>

ICF Report assumes that biofuels are the answer: "The future supply and the source of biodiesel and ethanol are obviously critical to meeting the HCEI goals." (pg 86)

In areas where there are sharp disagreements between technology proponents and peer review scientific literature, ICF adopts the industry spin. Because plants are green, biofuel proponents argue that they are "Net Zero" or "Net Carbon Balance". The industry spin is based on no analysis, they simply mean "didn't look, don't care." Fossil fuels are used every step of the way in making biofuels: pesticides and fertilizers are made from fossil fuel; tractors and other farm equipment use diesel; fossil fuels are used to convert plant material into biofuel. Fertilizer use releases nitrogen compounds into the atmosphere which are far more potent greenhouse gas than carbon emissions. The changes in soil content (humus) is also a major greenhouse gas contributor. Finally, land use changes account for 1/5 of worldwide greenhouse gas emissions.

ICF Report states: "When manufactured from plant oils, biodiesel is also considered to be in net carbon balance, since it only emits as much carbon dioxide as was initially sequestered, or stored, within the plant used for fuel production." (pg 54)

A look at the footnotes in the ICF report shows that most sources are by the author (ICF), the state and federal government, HECO and MECO, and/or were written under contract to the foregoing. There are no countering papers cited. There is one and only one path forward: the path mapped out by DBEDT.

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<sup>2</sup> **Preface for "Towards sustainable production and use of resources: Assessing Biofuels" (October 2009)**, [www.unep.fr/scp/rpanel/Biofuels.htm](http://www.unep.fr/scp/rpanel/Biofuels.htm)

A major accounting error has been found in international greenhouse gas schemes including the Kyoto Protocol, the European cap and trade system, and the Waxman-Markey climate bill. Europe and the U.S. get credit for switching to biofuels but less developed countries are not penalized or capped for land use changes including destroying rainforests to grow biofuels. This was noted in a recent Wall Street Journal Editorial (Review and Outlook) published on October 29, 2009 titled "Sins of Emissions":

"The latest embarrassment arrives via the peer-reviewed journal Science, not known for its right-wing inclinations. A new paper calls attention to what the authors (led by Princeton's Tim Searchinger) call "a critical accounting error" in the way carbon emissions from biofuels are measured in climate-change programs world-wide. Bernie Madoff had a few critical accounting errors too. ...

Cap-and-trade programs exacerbate the problem because ...biofuels are generally grown in developing countries (where emissions aren't capped). So if Malaysians burn down a rain forest to grow palm oil that ends up in German biodiesel, Malaysia doesn't count the land-use emissions and Germany doesn't count the tail-pipe emissions."

The ICF Report states that imported biofuels are not counted: "GHG [greenhouse gas] emissions from the combustion of biofuels are treated as biogenic in the model. This means that the actual use of biofuels does not contribute to global Warming". (pg 87)

Blue Earth Biofuels has filed a federal lawsuit for breach of contract with HECO, MECO, Karl Stahlkopf and Aloha Petroleum. Current utility plans have no role for Blue Earth Biofuels. However ICF believes that the plant will clear all lawsuits and regulatory review, including environmental analysis, to come on line within 2 years: "For Biodiesel it is assumed that one of the plants currently being considered proceeds and comes into service in Maui in 2011 ...These assumptions are based on current plans for Blue Earth Biofuels ...which is assumed to be delayed due to the economic slowdown." (pg 133)

The Hawai'i Department of Health has not approved any air permits for a biodiesel fired generator. HECO and MECO hope to import palm oil; then to test generators at Kahe and Maalaea; and to give the data to DOH. The DOH will evaluate the data before issuing any biofuel air permit. ICF is unconcerned. "The use of biodiesel as compared with diesel or fuel oil will reduce other air emissions" (pg 53)

Numerous entities have pointed out that palm oil biodiesel has enormous negative consequences. These sources include the Wall Street Journal, and numerous Hawaii-based churches, environmental, cultural, justice and community groups. ICF Report: "the utilities are also testing the use of palm oil as a fuel. This could offer a lower cost alternative" (pg 51)

Hawai'i sugar companies are folding because they can not survive. However, ICF is undeterred: "It is assumed that ethanol plants will be developed within the State ...with the capacity of producing 40 million gallons per year of

ethanol." (pg 87) "For Ethanol it is assumed that three plants will be built within the State: (1) In Oahu, a 15 million gallon/year (mmgy) plant ...to come on-line in 2012; (2) In Maui a 15 mmgy plant is assumed to come on-line in 2011; (3) In Kauai a 10 mmgy plant is assumed to come on-line in 2014." (pg 133)

A proposed 30 MW windfarm in Kahuku, Oahu is currently undergoing regulatory review by the PUC. Another 25 MW windfarm is planned by developers, but HECO has broken off talks. ICF states that 80MW of Kahuku wind will be on line in 2009 (pg 126-27)

First Wind has built a windfarm (KWP I) at Kaheawa Pastures mauka of Maalaea, Maui. They want a second windfarm (KWP II). Negotiations with MECO have stalled and any action is not likely soon because demand for electricity on Maui has fallen 10% in the past year.

MECO prefers diversification of wind sites, with the next windfarm being at Ulupalakua near Kula. This was originally a Shell proposal, but now Shell has been replaced by other investors.

However, ICF states that the new First Wind windfarm (KWP II) will be operational this year (2009) and that Shell is still here and will build a windfarm at Ulupalakua in 2015. (pg 126-27)

There have been as many as 8 proposals to build Ocean Thermal Energy Conversion (OTEC) facilities in Hawaii. The three strongest are by Lockheed Martin, Makai Ocean Engineering, and OCEES, all of which have been involved in local OTEC research and demonstration projects for decades, including the on-shore and off-shore demonstration projects at NELHA. One incredible weak outside OTEC proposal has been made by Sea Solar. ICF correctly points out that HECO has accepted a Lockheed Martin OTEC demonstration project scheduled for 2015. ICF also states that Sea Solar will build one in 2013. (pg 126-27) This will never happen.

Hamakua Biomass was to be fast-tracked through the regulatory process, ahead of the new PUC mandated Competitive Bidding process. But negotiations bogged down and the PUC noted that the fast track appeared to be no faster than the slow track, and so the PUC terminated the fast track process for Hamakua Biomass. The company must now go through the Competitive Bidding process. In Competitive Bidding they are going up against two other biomass companies. HELCO has the capacity to have at most one biomass contract. The three companies are bogged down in land acquisition, financing, and community opposition. They are a long way from completing their regulatory hurdles. ICF states that Hamakua Biomass will be the entity chosen and that a 25MW facility will come on line next year. (pg 126-27)

The Big Island is at 39% renewable. Several countries and some states exceed that. Oahu is at a mere 4% renewable, all of it comes from H-POWER. One third (1/3) of the energy H-POWER produces is burning plastics and other fossil fuels, but it all counts as green energy under state law. Oahu could add 400-

600MW of intermittent renewables onto its system to match the renewable penetration level on the Big Island. ICF Report: "Hawaii now derives a relatively high percentage of its electricity from renewable sources." (pg 44)

The Hawaii Clean Energy Initiative (HCEI) states that 70% of Hawai'i's energy will come from clean energy sources by 2030. That is, 70% of the non-marine, non-aviation energy demand, that is 70% of 67%, or 49% of the total. Of this, 21% is to come from energy efficiency, at a rate of acquisition that has never ever be achieved anywhere in the world. The remaining 28% will be clean energy, with "clean" being undefined. If it is assumed that clean means "renewable energy" or "alternative fuel", then it should be noted that these two terms, under existing state law, both include some fossil fuels. ICF Report: "Hawaii's most recent initiative—the Hawaii Clean Energy Initiative (HCEI)—sets an ambitious target of transforming the State's energy use to obtain 70% of Hawaii's energy from clean sources by 2030." (pg 6)

ICF then states there are three options or work plans, but weighs the options very differently. The report spends 52 pages on DBEDT's HCEI proposal; 12 pages on combining DBEDT's HCEI proposal with a federal cap and trade scheme; and a mere 8 pages on a carbon tax. All of these options focus on buzzwords and not on solutions.

ICF Report: "A carbon tax is a tax on the carbon content of fossil fuels including coal, oil and gas" (91) but not products made from coal, oil and gas. Importing energy to make goods in Hawai'i will be taxed. Importing finished goods made from the very same energy sources will not be taxed. Thus a carbon tax favors imports over local production and may increase our trade imbalance re imports and exports and thus make us less self-reliant. In addition, rainforest biofuel would not be taxed because it is "green."

It is assumed that to increase the amount of renewables on the system, the utilities need more command and control mechanisms. HCEI concentrates greater power in utilities and into the concept of centralization: interlocking island grids through inter-island cables, smart grids, the abilities of utilities to control energy devices inside residential and commercial buildings. All of this will cost \$1-2 billion and theoretically enable the utilities to then let more renewables onto the grid.

This is the fourth major attempt by the utilities to expand the use of renewable energy. HECO established the HEI holding company (1981-83) because unregulated companies owned by HEI (HECO sister companies) could do what HECO couldn't. Then circa 2000 HECO decided that it wasn't parent companies but subsidiaries that would enable greater renewable penetration. Renewable Hawaii Inc was created as a HECO subsidiary. Neither HEI nor RHI succeeded. So in the 2002-07 the third method was used: change the definition of renewables to include some types of fossil fuel, such as heat recovered from burning coal, and biofuels made from fossil fuel. The use of "renewables" suddenly shot up. Now the fourth approach: strengthen HECO, build centralized power systems and renewables will follow.

One alternative is to spend the same \$1-2 billion on rooftop solar water heaters, photovoltaic panels, and micro-wind systems. A second alternative is to use the money to supply 50% of the cost for homeowners and businesses to do it, on top of the tax breaks currently given.

Interconnected centralized systems using command and control systems or decentralized smart systems.

One could create two boxes and put certain types of coal, oil, gas, biofuel, solar, wind, wave and thermal in each box such that anything in Box A is better for the environment than anything in Box B. That is, there are certain ways of making solar would be worse than certain ways of making coal. One could use precious metals from the Congo civil war- the deadliest war since WW2. One could ship goods around the world using highly polluting vessels. Just because some bureaucrat assumes that renewables, or clean energy, lowers greenhouse gas levels, doesn't make it so. ICF: "Hawaii's energy-related GHG and CAC emissions will be reduced in proportion to the level of renewable energy used to substitute for fossil-fired" (pg 45).