

HB 1628 HD1

WRITTEN TESTIMONY

TESTIMONY BY GEORGINA K. KAWAMURA
DIRECTOR, DEPARTMENT OF BUDGET AND FINANCE
STATE OF HAWAII
TO THE SENATE COMMITTEE ON ENERGY AND ENVIRONMENT
ON
HOUSE BILL NO. 1628, H.D. 1

March 17, 2009

RELATING TO THE ISSUANCE OF SPECIAL PURPOSE REVENUE BONDS TO ASSIST
BIOENERGY HAWAII, LLC.

House Bill No. 1628, H.D. 1, authorizes the issuance of up to \$100,000,000 in special purpose revenue bonds to assist BioEnergy Hawaii, LLC, or a partnership in which BioEnergy Hawaii, LLC is a general partner, with the establishment of cogeneration and related energy production facilities pursuant to Part V, Chapter 39A, Hawaii Revised Statutes.

The Department has a technical comment on this bill. Under Section 144 of the Internal Revenue Code of 1986, as amended, tax exempt financing for industrial projects are limited to \$10 million. We recommend that the project party consult with a bond counsel firm to determine if the project may qualify, under certain exemptions, for the full amount of tax-exempt financing.

Pacific Waste, Inc.
74-5588 Pawai Place
Kailua-Kona, HI 96740
(808)326-4911

HAWAII STATE SENATE - REGULAR SESSION OF 2009
COMMITTEE ON ENERGY AND THE ENVIRONMENT

March 17, 2009
3:00 PM - Conference Room 225

RE: HB 1628, HD1 RELATING TO THE ISSUANCE OF SPECIAL PURPOSE REVENUE BONDS TO ASSIST BIOENERGY HAWAII, LLC.

Chair Sen. Mike Gabbard, V. C. J Kalani English and Committee Members:

Good Afternoon. My name is Dante Carpenter and I speak in favor HB 1628 Relating to the issuance of special purpose revenue bonds for BioEnergy Hawaii, LLC. (BEH) (Companion SB 486). For the past 10 years, I have been a member of the Board of Directors of Pacific Waste Inc., the owner and managing member in a project proposed in West Hawaii by BEH.

I sincerely believe that the total scope of this project which will combine state-of-the-art technologies proposed to be located in Kona in the Natural Energy Laboratory/Host Park area will help West Hawaii in general and NELHA in particular towards meeting its needs in the area of energy self-sufficiency.

As Mayor of Hawaii County from 1984 thru 1988 it was my pleasure to serve as one of seven ex-officio voting members of the NELH Managing board. In fact, I personally instructed Gregory Mooers, Deputy Managing Director stationed in Kona, to encourage the expansion of land and facilities by whatever means and to the greatest extent possible in light of the huge future potential of NELH!

In 1990, pursuant to Act 224, 1990 Hawaii Session Law, at 474-80, the legislature wisely consolidated management of the NELH and the adjoining Hawaii Ocean Science and Technology (HOST) park to attract commercialization projects in concert with NELH activity. HRS chapter 227D (1993) replaced chapter 227 and established the Natural Energy Laboratory of Hawaii Authority (NELHA) to manage both NELH and HOST. Pursuant to 277D-1: "Research and technology park" means a tract of real property determined by the NELHA board as being suitable for use as building sites for projects engaged in research, development, demonstration, processing, or manufacturing activities or retail or commercial enterprises utilizing or in support of utilization of natural resources or geothermal energy. This includes, but is not limited to, research, commercialization, training, education, technical analyses, pilot plant, or prototype product development, and may include the installation of

improvements to tracts incidental to the use of real property as a research and technology park, such as water, sewer, sewage and waste disposal, and drainage facilities, sufficient to adequately service projects in the research and technology park, and provision of incidental transportation facilities, power distribution facilities, and communication facilities.”

NELHA is thus empowered to do much more than its predecessor NELH. This broadened power and authority inures to its present day status. Indeed, as pointed out by CEO Ron Baird at a recent meeting, its authority extends throughout the State of Hawaii and is not merely limited to Keahole in Kona.

Moreover, as a marine-mechanical engineer formerly engaged in design and operations of raw sugar production machinery evaporation systems, including steam and electrical generation units, it's exciting to be a participant in the BEH proposal. The \$100 M + investment which includes technical processes that utilize various waste streams, the combination of CO2 generation to support the growth of algae in photo-bioreactor units, and ultimately the production of over 9 MW of electrical power for distribution to the tenants, neighbors Kona International Airport, too, is an exciting project for both West Hawaii and NELHA.

The BEH Team is committed to complete an EIS, among other studies, and continue discussions with staff of NELHA. Project Manager, Guy Kaniho, formerly managed the operations of Pacific Waste, Inc., the largest Refuse Hauler on the Big Island and competently represents the interests of BEH.

With the economy in a slump, NELHA's decreased funding support from State of Hawaii and/or other sources, the exorbitant cost of energy, the challenge to make timely and bold decisions represents a mutual opportunity. We look forward to working with the NELHA Board, CEO Ron Baird, key staff members and all other cognizant private or government agencies.

Finally, in addition to the sales of electrical power to the local utilities, the use of thermal fluid output from the cogeneration facility would be utilized by existing and planned businesses for both manufacturing and processing enterprises with economic benefits to the surrounding community. The use of special purpose revenue bonds is in keeping with the provisions of Part V, Chapter 39A, HRS.

We strongly recommend passage of HB 1628, HD1.

Thank you very much for your consideration.



BEFORE THE

SENATE COMMITTEE ON ENERGY AND ENVIRONMENT

Senator Mike Gabbard, Chair
Senator J. Kalani English, Vice Chair

HB1678, HD1

RELATING TO SPECIAL PURPOSE REVENUE BONDS

Testimony of

DAVID USHIO

Vice Chair

500 Ala Moana Boulevard, Suite 400
Honolulu, Hawaii 96813

Tuesday, March 17, 2009, 3:00 pm
State Capitol, Room 225

Chair Gabbard and members of the Committee on Energy & Environment:

My name is David Ushio, Vice Chair of LifeGrid Solutions LLC. LifeGrid **SUPPORTS** HB1678, HD1, which authorizes special purpose revenue bonds for our company to develop non-fossil fuel energy production in Hawaii.

ABOUT LIFEGRID SOLUTIONS, LLC

LifeGrid is a joint venture consortium that collectively possesses the latest and most proven patented technologies in the fields of biotechnology and biofuels. We provide turn-key waste conversion energy solutions that utilize the most advanced systems and processes to increase energy independence and improve environmental conditions. In particular, LifeGrid specializes in the production of biodiesel and ethanol production, as well as research and development in biofuel feedstock and processing. LifeGrid's patented reactor technology reduces the required biodiesel plant footprint by 50% as compared to traditional biodiesel production facilities; increases efficiency because of its ability to create reaction and separation simultaneously; and uses less sodium hydroxide and methanol, which results in a much purer byproduct.

LifeGrid currently operates five (5) biodiesel and ethanol plants throughout the U.S., including production facilities in Blountville, Tennessee (45 million gallons of biodiesel per year production capability); Aiken, South Carolina (12 million gallons of biodiesel per year production capability); Madison, Pennsylvania (65 million gallons of ethanol per year production capability); Tulsa, Oklahoma (100 million gallons per year production capability); and Mobile, Alabama (100 million gallons of ethanol per year production capability).

LifeGrid's current customers for its biodiesel and ethanol products are wide-reaching, including Alcoa, Inc., BAE Systems, Eastman Kodak, General Motors, and the states of Pennsylvania, Oklahoma and Alabama.

PLASMA GASIFICATION: SOLID WASTE TO ENERGY

LifeGrid utilizes a unique patented processing technology called plasma gasification. Plasma gasification can convert almost any waste material into usable products such as electricity, ethanol, vitrified glass and other salable products. Examples of potential feedstock include biomass, municipal landfill and industrial wastes, sludge from waste treatment processes, agricultural waste, forest products, energy crops, and bagasse. It is a true waste to energy system that goes beyond the traditional incinerator used at HPower, and beyond standard gasification processes like plasma arc. Plasma gasification allows for up to 97% conversion of waste to energy in a self-contained, safe and environmentally friendly manner.

Because LifeGrid's processes utilize municipal solid waste, it can also provide significant relief to Oahu's landfill at Waimanalo Gulch. For example, in 2006, Hawaii produced about 1.7 million tons of municipal solid waste. In order to produce 100 million gallons of ethanol per year, about 1.2 million tons of municipal solid waste would be required. Sludge from waste water treatment plants can also be converted into ethanol by gasification thereby reducing the disposal needs of waste water treatment facilities. Additionally, Hawaii has plentiful supplies of bagasse that are optimal for ethanol production via gasification.

OUR PLANS IN HAWAII

LifeGrid is engaging in the planning, design, and construction of a biofuel refinery capable of producing approximately one hundred million gallons of ethanol and approximately forty million gallons of biodiesel per year. We intend to utilize a variety of feedstock available for biodiesel and ethanol production, particularly municipal solid waste. Public-private partnerships will be pursued with waste management companies, agricultural feedstock producers as well as the City & County of Honolulu to obtain biodiesel feedstock for LifeGrid's plant operations. Long-term contracts with government agencies and other ethanol distributors could be pursued to ensure stable and reliable sources of locally produced ethanol over an extended period of time. Additionally, LifeGrid seeks to conduct important research and development activities to further biofuel feedstock production.

About \$550 million is anticipated to be invested by LifeGrid in Hawaii, including:

- Ethanol Facility (\$450 million; Plasma Gasification process)
- Biodiesel Facility (\$45 million)
- Research and Development Facility (\$4.0 million)

IMMEDIATE BENEFITS TO HAWAII

LifeGrid has chosen to locate its renewable energy business in the state of Hawaii. We have chosen to locate in Hawaii because we believe that Hawaii has demonstrated its commitment to become the "Showcase to the World for Green Technology" and we want to contribute to this effort.

As Hawaii sets its goal to generate 70% of its energy from renewable sources by 2030, LifeGrid's commitment to contribute to Hawaii's energy independence is unwavering. LifeGrid's executive committee seeks to ensure that both the company and residents of Hawaii benefit from LifeGrid's corporate activities.

A unique aspect of LifeGrid's activities is to meet the local demand for ethanol. With its 10% ethanol requirement in gasoline, Hawaii currently imports 100% of its ethanol. Hawaii lawmakers enacted such legislation in hopes of providing not only a renewable source of liquid fuel for Hawaii residents, but to promote local production of ethanol using locally grown agricultural feedstock. With no ethanol processing plants in Hawaii, the ethanol mandate is ineffective, and in many respects not producing the intended results when enacted. LifeGrid's proposed gasification plant will provide an immediate producer of ethanol. This will enable the state of Hawaii to meet its current mandate of 10% ethanol requirement for gasoline and the 20% requirement for ethanol by 2020.

LifeGrid's locally owned and operated "state of the art" ethanol/biodiesel production facility will also do the following;

1. Eliminate the additional cost to the consumer for imported ethanol from foreign sources;
2. Stimulate the demand for Hawaii grown renewable energy agricultural feedstock for ethanol production which will in turn create much needed green energy jobs in Hawaii.
3. Create engineering and construction jobs in Hawaii required to build the LifeGrid facilities.
4. Create DOD "dual use" technology spin offs using the Hawaii state of the art LifeGrid ethanol/biodiesel facility as a working model for Department of Defense mandated requirements for sustainable green technologies to reduce DOD's dependence on foreign oil.
5. Create exportable high tech jobs for LifeGrid's Hawaii based renewable energy workers.

LifeGrid's patented state of the art technologies can also help solve some of Hawaii's pressing environmental problems.

1. LifeGrid can use municipal solid waste as a feedstock for the production of renewable energy fuels such as biodiesel and ethanol.
2. LifeGrid has the capability to reclaim the solid waste in the filled to capacity landfills such as Waimanalo Gulch and use the reclaimed solid waste as feedstock in the production of renewable fuels. This has the added advantage of freeing up needed space in the current landfills while producing much needed renewable energy fuels.
3. LifeGrid can also use sludge generated by the waste water treatment plants as feedstock in the production of renewable energy fuels. Currently this sludge is being dumped in the landfills.
4. LifeGrid operates on a 97% efficiency rate and generates more useable output with virtually no ash and/or emissions into the air. The current solid waste to electricity plants operate on an approximate 55% efficiency rate which creates large quantities of ash which is dumped into the landfills.

We believe that our LifeGrid patented state of the art technology and proven production capability can be a major asset in solving the unique environmental and sustainability issues challenging the citizens of Hawaii.

LifeGrid's owners, officers, and staff are committed to making Hawaii a "Center of Excellence for Advanced Green Technology". The State of Hawaii has demonstrated the commitment to this effort and we wish to be a partner to fulfill this vision.

HOW WE PLAN TO USE THE SPRB

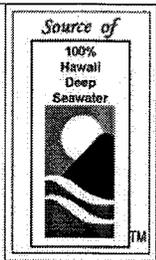
Funds raised from the special purpose revenue bond will be used to finance Phase I of LifeGrid's Hawaii activities. In particular, funds will be used to plan, design and construct its biodiesel facility capable of producing 45 million gallons of biodiesel. Further, an engineering feasibility study will be conducted to determine location, required production capacity, identification of feedstock types and sources, as well as economic and environmental impact of developing the plasma gasification ethanol plant (Phase II).

Thank you for the opportunity to testify in **SUPPORT** of HB1678, HD1.



NATURAL ENERGY LABORATORY OF HAWAII AUTHORITY

An Attached Agency of the Department of Business, Economic Development & Tourism, State of Hawaii



Statement of
RON BAIRD
CHIEF EXECUTIVE OFFICER
Natural Energy Laboratory of Hawaii Authority
before the
SENATE COMMITTEE ON ENERGY AND ENVIRONMENT
March 17, 2009
3:00 p.m.
State Capitol Conference Room 225

in consideration of
HB 1628 HD1
RELATING TO THE ISSUANCE OF SPECIAL PURPOSE REVENUE BONDS TO ASSIST BIOENERGY HAWAII, LLC.

Chair Gabbard, Vice-Chair English, and members of the Senate Committee on Energy and Environment, I am Ron Baird Chief Executive Officer of the Natural Energy Laboratory of Hawaii Authority, located in Kailua-Kona.

Bio Energy Hawaii presents an opportunity for us, as a society, to move forward toward energy independence and self-sufficiency in an important number of ways. Hawai'i is likely the most carbon intensive consuming society on earth. We need to consider reducing our carbon footprint while simultaneously achieving two other goals: reducing our dependence on imported fossil fuels and increasing self-sufficiency in the production of other goods. This project represents an important first step toward achieving all three and can serve as a model for similar projects elsewhere in the state.

Bio Energy Hawaii proposes to build a renewable, waste-to-energy facility at NELHA. This significantly reduces the amount of diesel fuel consumed by its trucks, achieves an unprecedented level of recycling glass, metal, and the like AND aims to:

- 1.) Produce 6 to 8 megawatts of electricity (enough to supply six to eight thousand typical Island of Hawaii homes). The energy would be produced from a renewable resource (waste) that otherwise clogs our environment with non-decomposable trash or otherwise contributes to our largest homegrown export --- waste paper.
- 2.) Recycle carbon dioxide from the gasification of the waste into energy. In today's world, recycling the carbon is an important contributor to reducing society's carbon footprint. Bio Energy Hawaii has committed to doing several things with the carbon dioxide from gasification: sell it to local farmers who otherwise import their carbon dioxide (used to stimulate plant growth) and use it in the production of biofuels from algae. In the latter regard, the company envisions that at worst, the algae is recycled

to generate additional electricity and ultimately will be used in a proprietary process to produce 6,000,000 to 8,000,000 gallons of biodiesel on an annual basis.

Displacement of that much fossil fuel, at today's prices, saves the citizens of Hawai'i \$18 to \$24 million annually in the monies exported forever from Hawai'i to pay for imported fuels.

- 3.) What happens to the leftover biomass from fuel production? Research on that is being conducted vigorously and actively all over the world. The residual is a high protein material that likely can be rendered into animal foods. Hawai'i imports virtually all its cattle, hog, chicken, horse, fish and other animal foods. Making this residual into home grown animal feeds would create a beneficial effect for all our citizens, certainly not the least of which is the agricultural production sector.

The capital investment to help make this plant a reality, assuming the NELHA Board of Directors approves its lease application, could set the stage for similar operations designed to make our state more self reliant and less susceptible to wild swings in the price of fossil fuels.

NELHA supports the passage of this Bill into an Act as NELHA believes its passage and implementation will make a significant positive economic impact on the future of the state and its well-being.

Thank you very much for your consideration of my testimony and if you have any questions, I would be happy to take and answer them now to the best of my ability.