

HB 855,

HD 1

TESTIMONY BY KALBERT K. YOUNG
DIRECTOR, DEPARTMENT OF BUDGET AND FINANCE
STATE OF HAWAII
TO THE SENATE COMMITTEE ON ENERGY AND ENVIRONMENT
ON
HOUSE BILL NO. 855, H.D. 1

MARCH 17, 2011

RELATING TO THE ISSUANCE OF SPECIAL PURPOSE REVENUE BONDS TO
ASSIST PACIFIC POWER AND WATER COMPANY, INC., IN THE DEVELOPMENT
OF HYDROPOWER FACILITIES IN HAWAII

House Bill No. 855, H.D. 1, authorizes the issuance of special purpose revenue bonds to assist Pacific Power and Water Company, Inc., with the planning, permitting, designing, constructing, equipping and operating of hydropower plants at locations throughout Hawaii 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 may be limited to \$10 million. The Department staff met with representatives of PPWC and they stated that they have consulted with a bond counsel firm and believe that their project is eligible for the \$25,000,000 of special purpose revenue bond financing as originally contained in House Bill No. 855.

The Department recommends amendments to two Sections of the bill, as follows (new language underlined):

“SECTION 4. The department of budget and finance is authorized, from time to time, including times subsequent to June 30, 2016, to issue special purpose revenue bonds...”

“SECTION 5. The authorization to issue special purpose revenue bonds under this Act shall lapse on June 30, 2016.”

The amendments to Sections 4 and 5 will allow this authorization for a period of five years, which will be consistent with Section 39A-117, HRS, and provides for a maximum authorization period of five years from its enactment.

Please note that Senate Standing Committee Report No. 179 required PPWC to obtain a statement from the Department that we have reviewed their business plan and financial statements. The Department has requested that PPWC submit this information to the Department so that we can provide the required statement.

Dr. Patrick Sullivan
Chairman, Pacific Power & Water Company, Inc.
828 Fort Street Mall, Suite 600
Honolulu, HI 96813
January 31, 2011

Committee on Energy and Environment
Senator Mike Gabbard, Chair
Senator Kalani English, Vice Chair
Hearing on March 17, 2011 at 2:55pm in room 225

TESTIMONY in SUPPORT of HB 855, Relating to the Issuance of Special Purpose Revenue Bonds to Assist Pacific Power and Water Company, Inc., in the Development of Hydropower Facilities in Hawai'i.

Dear Committee Members,

Thank you for hearing HB 855 today.

As requested by the ENE/CPN committees during the hearing of the Senate version of this bill (SB 1214), we have had initial meetings with Budget and Finance (Scott Kami) and DBEDT (Joshua Strickler). We will be providing them with our business plan and any financials for review soon, so that they can respond to the committees by the April 15 deadline.

As previously mentioned, **small-scale hydropower at Hawai'i's existing dams will:**

- a) Generate revenue to pay for dam maintenance and repairs, thereby improving public safety
- b) Reduce Hawai'i's dependence on fossil fuels and help meet our renewable energy goals
- c) Create jobs in the renewable energy sector
- d) Keep the door open to future traditional agriculture and green energy needs

Thank you for considering this bill today. Please see the attached quad sheet and white paper for more details.

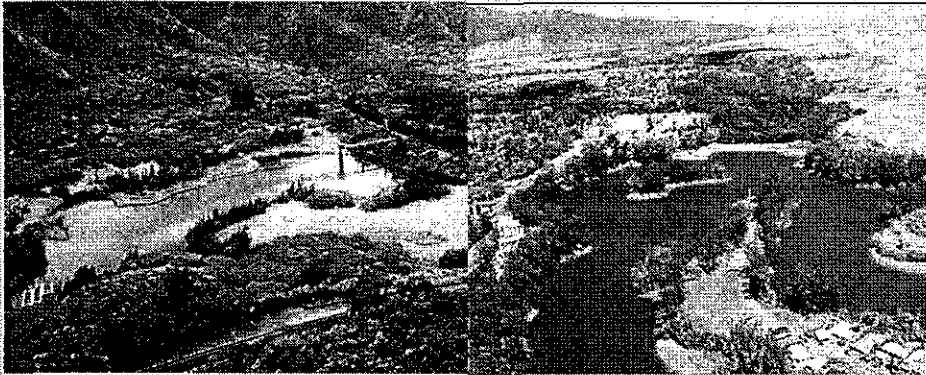
Sincerely,

Patrick Sullivan
Pacific Power and Water Company, Inc.
808-531-3017

Small-scale Hydropower at Hawai'i's Dams

SUMMARY

Pacific Power and Water Company, Inc. (PPWC) was formed to convert Hawai'i's existing dams into hydropower dams



PPWC is an Oceanit spin off company. Oceanit is a 25 year old Hawai'i firm with extensive clean energy experience as well as dam inventoring, monitoring, and decommissioning projects.

BENEFITS & FEATURES

Hydropower at Hawai'i's existing dams will:

- Improve public safety** by generating revenue to pay for much needed dam maintenance and repairs. Small-scale hydro will give dam owners an economically viable alternative to the expensive process of decommissioning.
- Produce renewable energy** and help reduce our dependence on foreign oil. Hawai'i is the most fossil fuel dependent state in the country – imported oil accounts for 90% of our energy needs.
- Create jobs** in the renewable energy sector. Hawai'i is heavily reliant on only a few economic sectors – tourism and the military account for 50% of our economy. Small-scale hydro will allow us to diversify.
- Keep the door open for **future traditional agriculture and green energy projects**. Our dams were built to provide irrigation for agriculture. Agriculture holds promise for the future, and maintaining the dams will allow us to grow green energy crops like kukui and jatropha.

WHY SMALL-SCALE HYDROPOWER NOW?

Hawai'i's dams are in need of repair and maintenance to improve public safety

- Dam owners do not have the money to perform necessary maintenance
- Dam owners are considering the expensive process of decommissioning as a means of reducing liability
- Decommissioning closes the door on future agricultural uses – traditional and green energy
- Small-scale hydro is proving itself viable across the country and the globe

PROPOSED LEGISLATION

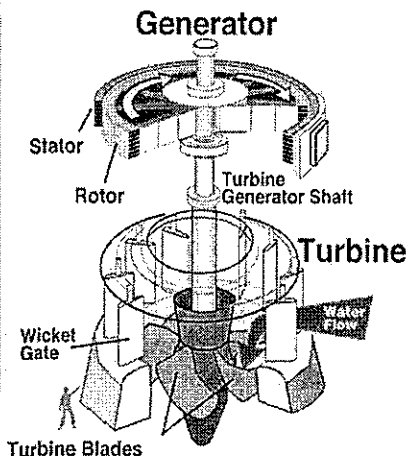
\$25 million in Special Purpose Revenue Bonds: HB 855/SB 1214

Special purpose revenue bonds will allow PPWC to initially finance the development of small-scale hydropower facilities on O'ahu.

PPWC will coordinate projects with:

- Dam owners and stakeholders
- The Department of Land and Natural Resources and other state agencies

Small-scale hydropower is estimated to generate 23 jobs per megawatt (excluding initial maintenance, repairs, and retrofitting) according to a 2009 study commissioned by the National Hydropower Association.



Hydropower Generation (Army Corps of Engineers)

Company: Pacific Power and Water Company Inc.

Contact: Dr. Pat Sullivan

Email: psullivan@oceanit.com

Phone: 808.531.3017

Converting Existing non-Powered Hawai'i Dams into Small-Scale Hydropower Dams

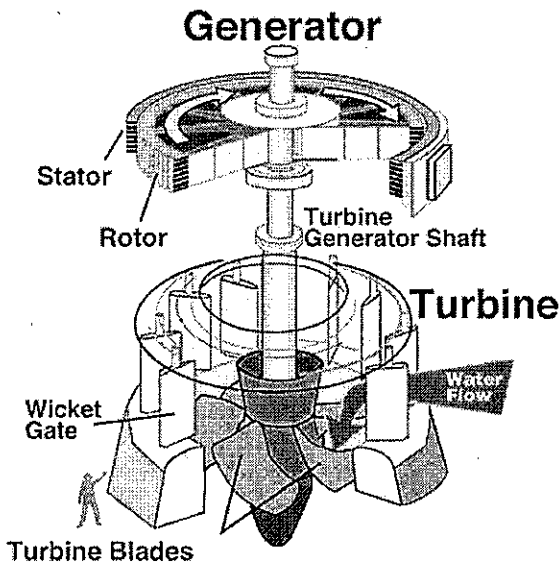
Hawai'i has a few hundred dams throughout the islands, most of them dating back to the plantation-era. Many of our existing dams in Hawai'i are in need of significant repair, are not in active use, or are being considered for closure due to the inherent dangers and liabilities associated with dams.

Small-scale hydropower installations will a) generate revenue to **pay for dam repairs and maintenance**, thereby reducing liability and improving public safety, b) **reduce Hawai'i's dependence on fossil fuels** and help meet our renewable energy targets, c) **create jobs** in the renewable energy sector and d) ensure that existing dams are well-maintained for **traditional agriculture and future green energy needs**.

Who is Pacific Power and Water Company?

Pacific Power and Water Company, Inc. is an Oceanit-formed company that is focused on converting Hawai'i's existing non-powered dams into small-scale hydropower dams. Oceanit is a twenty-five year old Hawai'i science and engineering firm with a track record that includes numerous alternative energy and water-related research and engineering projects, as well as dam inventorying, monitoring and decommissioning projects. We have a significant amount of expertise and depth of knowledge regarding Hawai'i's dams and their unique attributes as well as hydropower projects.

What is hydroelectric power?



Hydroelectric power is the creation of electricity by using the flow of water to turn turbines, which in turn operate generators. Hydroelectricity is the most widely used form of renewable energy, accounting for 67% of America's domestic renewable energy generation, and approximately 20% of the world's electricity.¹ Once completed, a hydroelectric facility produces no direct waste and emits significantly less carbon dioxide (CO₂) than a conventional fossil-fuel powered plant. Hydroelectric power is reliable and proven over time and incurs low operating and maintenance costs.

Figure 1: Hydroelectric power generation (U.S. Army Corps of Engineers)

¹ National Hydropower Association

Why does hydropower make sense for Hawai‘i’s existing dams?

Hydro for improved public safety

There are many existing dams in Hawai‘i that are in need of repair or are being considered for closure due to the inherent dangers and liabilities associated with dams. Necessary capital improvements can be costly and the day to day maintenance and operation of a dam can be expensive as well. Small-scale hydro power at Hawai‘i’s dams will generate revenue to help pay for much needed maintenance and repairs, thereby reducing liability and improving public safety.

Hydro for energy

Hawai‘i is the most fossil fuel dependent state in the nation – imported oil accounts for 90% of our energy needs. This represents up to \$7 billion a year in money leaving the state to help pay for energy.² Hydropower is America’s largest clean, renewable energy resource, accounting for 67% of the country’s renewable energy generation. Small-scale hydropower at Hawai‘i’s dams can help meet the state’s Clean Energy Initiative goal of generating 40% of our energy from local renewable sources.

Hydro for jobs

Hawai‘i is heavily reliant on only a few economic sectors – tourism and the military together account for roughly 50% of our economy.³ There is a clear need for economic diversification – growth of new economic sectors will translate into a more stable economy for the future. Converting Hawai‘i’s non-powered dams into small-scale hydropower dams will create jobs throughout the state. According to a 2009 study commissioned by the National Hydropower Association, installing 60,000 MW of hydropower across the US would result in 1.4 million cumulative jobs by 2025. That’s roughly 23 jobs per MW of hydropower.

Hydro to support agriculture

Our dams were built to provide irrigation for agriculture. While the agricultural sector of the economy has declined considerably, agriculture still plays an important role in the state and holds promise for the future. From fresh produce for local consumption to export products like macadamia nuts, coffee and flowers, to biofuel crops like jatropha and kukui, agriculture is likely to remain a part of Hawai‘i’s economy for generations to come. Using our dams to create hydropower will ensure that they are in good repair and ready to meet the future needs of agriculture.

² Department of Business, Economic Development and Tourism (DBEDT)

³ DBEDT