

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAI`I

In the Matter of the Application of)	PUC Docket 03-0371
)	
PUBLIC UTILITIES COMMISSION)	
)	
Instituting a Proceeding to)	
Investigating Distributed Generation)	
in Hawai`i)	
_____)	

LIFE OF THE LAND'S

REPLY BRIEF

&

CERTIFICATE OF SERVICE

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Aloha Commissioners

What are we leaving our children? Is it the legacy of a sewer that people have to spend a lifetime fixing? Of course we would wish our children to have parks, education, arts, music, and culture. Everything we do today will determine what we leave them. As the American Indians say -- we don't own the earth, we borrow it from our children. That has to be the motivating force for every decision we make. Like the pebble in the pond that will ripple for generations. We are either going to doom or gift our children and we choose to gift them.

Preface

The Public Utilities Commission opened a docket on Distributed Generation in late 2003. Life of the Land filed its Motion to Intervene (October 31, 2003); Statement of Position (May 7, 2004); Prehearing Conference Statement (November 24, 2004) and Opening Brief (March 7, 2005). In these public filings we laid out a convincing case for Distributed Generation ("DG") and against utility ownership of DG. We also participated in the three day Evidentiary Hearing (December 8-10, 2004).

Life of the Land's Distributed Generation Reply Brief covers the following issues:

1. Distributed Generation refers to generators located at or near load
2. The continued reliance on fossil fuel is environmentally foolish
3. The continued reliance on fossil fuel makes no economic sense
4. The Hawai'i State Constitution mandates energy-self-sufficiency
5. Monopolies use a variety of subtle and not so subtle techniques to maintain market share
6. HECO seeks regulatory approval to impose its monopolistic structure on a competitive market
7. HECO seeks regulatory approval to adopt a tariff which violates state law
8. HECO seeks regulatory approval for their energy policy which violates a constitutional mandate
9. The Consumer Advocate is in total support of all utility positions in this docket
10. The PUC should support DG in general, and renewable DG in particular
11. The PUC should reject utility DG

1. Distributed Generation refers to generators located at or near load

We believe that Distributed Generation refers to generation that is on or near sites where the generation is needed. Distributed Generation refers to the proximity of the generation (supply) to the load (demand).

2. The continued reliance on fossil fuel is environmentally foolish

Historically, fossil fuels transformed the world from a pre-industrial era to a post-industrial era and into the information/technology era. However, the rapid advancement of society has come with enormous negative externalities brought about by our unsustainable energy policy. These include Acid Rain; Toxic Emissions; Smog; Oil Spills; and Global Warming. (*See: Defense Department report warns of 'abrupt' global warming impact (Chemical and Engineering News, March 1, 2004); The Pentagon's Weather Nightmare (Fortune Magazine, Feb 25, 2004)*). It is imperative that we move beyond fossil fuels.

We should not subsidize the use of fossil fuel at the expense of our children. We should get onto the path to sustainability.

3. The continued reliance on fossil fuel makes no economic sense

Life of the Land strongly believes that replacing imported fuel with indigenous fuel has an enormous positive impact on local jobs and on economic prosperity. These twin economic externalities are often ignored in limited costs and benefits analyses of alternative energy futures. For Hawai'i, switching from imported fuels to indigenous fuels is equivalent to switching from fossil fuels to renewable energy resources, which also has positive environmental externalities. Life of the Land believes that a full appreciation of these economic and environmental externalities is crucial to building the proper framework for Distributed Generation.

Life of the Land presented a series of Exhibits which clearly show the enormous positive economic benefit resulting from a switch from foreign to local fuels.

- LOL-Exh-1 Job Jolt: The Economic Impacts of Repowering the Midwest: The Clean Energy Development Plan for the Heartland. Regional Economics Applications Laboratory for the Environmental Law & Policy Center. (December 2002);
- LOL-Exh-2 Economic Impact of Renewable Energy in Pennsylvania. Black & Veatch. (March 2004);
- LOL-Exh-3 The Potential Economic Impact of Nevada's Renewable Energy Resources. Center for Business and Economic Research at the University of Nevada, Las Vegas (2003);
- LOL-Exh-4 Imports, Exports and Economic Development by Enterprise Honolulu (formerly the O`ahu Economic Development Board);
- LOL-Exh-5 Export Enhancement and Import Substitution - Key Strategies for Hawai`i's Prosperity: by Enterprise Honolulu;
- LOL-Exh-6 Importing Energy, Exporting Jobs. U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE);
- LOL-Exh-8 Analysis of Renewable Portfolio Standard Options for Hawai`i. GDS Associates. Hawai`i Department of Business, Economic Development, and Tourism (DBEDT) (2001)

These studies analyze the economic multiplier effect resulting from investing in local resources. The economic multiplier effect means that one dollar invested in Hawai`i generates additional dollars to the state economy, and one dollar exported decreases the state GNP by more than one dollar. Each dollar that a tourist brings into Hawai`i ripples through the economy, each dollar exported for oil is a potential ripple that never materialized. The economic multiplier is calculated by analyzing money flows via an Input-Output Model. The analysis looks at both direct spending and indirect spending. Two related issues are foreign investment and leakage. Foreign investment refers to out-of-state money that is invested within the local economy. Leakage refers to all the ways money in the economy leaks out of the economy.

These exhibits are uncontested.

4. The Hawai`i State Constitution mandates energy-self-sufficiency

The shift to renewable energy resources was mandated by the 1978 amendments to the state constitution.

The Constitutional Convention ("Con Con") of 1978 proposed several amendments to the State

Constitution, including an amendment to mandate energy self-sufficiency. This mandate has been forgotten. However it is still part of the supreme law of the state.

The 1977 State Legislature authorized the Legislative Reference Bureau ("LRB") to provide assistance for the Constitutional Convention ("Con Con") of 1978.

The LRB Constitutional Amendment Information Sheets published in May, 1978, discussed the language used in Article X Section 1 of the State Constitution: "The legislature shall promote the conservation, development and utilization of agricultural resources, and fish, mineral, forest, water, land, game and other natural resources."

LRB offered alternatives: "The legislature shall promote ... It should be noted that under this provision state agencies or subdivisions of the state are not included, although the legislature clearly has the authority, if it wishes, to require them to comply with programs or laws designed to implement this policy. ... A broader mandate, such as 'the policy of the state shall be ...' or even 'the public policy of the state and duty of each person ...' is useful if the people believe that the public policy in question is so important and relevant to every aspect of social, economic, and governmental activity that it should be universally applied."

The Con Con Committee on Environment, Agriculture, Conservation and Land proposed amending this section. Their Standing Committee Report stated: "The consensus of your Committee with regard to self-sufficiency was to constitutionally recognize the growing concern and awareness of Hawai`i as being overly dependent on outside sources for, among other resources, food and energy. Your Committee spent much time considering the need for a separate section on an energy policy for the State. However, it was concluded that the promotion of energy conservation, the development of clean, renewable sources of energy, and the achievement of increased energy self-sufficiency would be adequately covered by the provisions of this section."

Proposed Article XI, Section 1 was adopted by the Con Con: "the State ... shall conserve and protect ... natural resources, including ... energy sources, and shall promote the development and utilization of these resources ... in furtherance of the self-sufficiency of the State."

The Con Con Submission & Information Committee wrote a summary of each proposed

amendment. The joint Sunday Star-Bulletin & Advertiser published this analysis in the first section of the paper on the Sunday before the election: "Environment and Resource Protection. If approved, the State and the counties would be required to conserve and protect the natural beauty and resources of Hawai'i and to promote the use and development of these resources in a manner consistent with conserving the resources while promoting self-sufficiency in Hawai'i. Each person is affirmed to have the right to a clean and healthy environment with the State holding all public natural resources in trust for the benefit of the people. Each person would have the right to sue to enforce his right to a clean and healthy environment as defined by law."

On election day, November 7, 1978, this proposed Constitutional Amendment was approved by the popular vote.

The LBR published a second round of Constitutional Amendment Information Sheets in late 1978. These were designed to inform the 1979 Legislature about the nature of the changes to the State Constitution, as amended by the voters in the November elections. These sheets clearly noted the difference between the proposed energy and the agricultural amendments to the State Constitution.

Energy: "The provision regarding 'self-sufficiency' was included to recognize the growing concern and awareness of Hawai'i as being overly dependent on outside sources for, among other reasons, food and energy. ... No legislation appears necessary at this time.

Agriculture: "Legislation necessary to provide standards and criteria must be developed to accomplish goals of conservation and protection of agricultural lands, promotion of diversified agriculture, increased agricultural self-sufficiency, and assurance of the availability of agriculturally suitable lands."

Since the constitutional mandate was enacted, the state has not increased its use of renewable energy. Thus the state is out of compliance with the State Constitution.

5. Monopolies use a variety of subtle and not so subtle techniques to maintain market share

Life of the Land produced national documents detailing the subtle ways utilities can and do interfere with potential competitors. (*Federal Energy Regulatory Commission (LOL-Exh-9); U.S.*

6. HECO seeks regulatory approval to impose its monopolistic structure on a competitive market

HECO's Brief is a self-serving document which offers no reasonable explanation about why HECO should be allowed to enter a free market and assume a domineering market presence. HECO alleges that "Utility-owned and operated CHP is a natural evolution of electric utility services." (Brief, p. 8) But HECO failed to identify any other Independently Owned Utility in the entire United States has followed a similar evolutionary path.

This path is based on market domination. "The HECO Companies do not have a dominant position in the CHP market - they will start with a zero percent share of the market." (Brief p. 26) HECO, MECO, and HELCO will move into and take 74-77% of each island's CHP market. (HECO's CHP Application, PUC DN 03-0366). This will result in a monopolistic monolith, as defined the premier measure of market power, the Herfindahl-Hirschman Index (HHI).

The HHI was developed by economists Orris Herfindahl and Albert O. Hirschman in the 1950s to measure market power. The HHI has and/or is being used by the U.S. Department of Justice, the Federal Trade Commission, State Attorneys General, the Federal Energy Regulatory Commission, the Courts, The Hawai`i Office of the Consumer Advocate (Final Comments., PUC DN 96-0493; October 16, 1998), HECO (Preliminary Statement of Position, PUC DN 96-0493; June 5, 1998) and the U.S. Department of Defense (Hawai`i PUC DN 96-0493) to measure market power and market control.

In evaluating the potential for competition in Hawai`i's electrical industry, HECO noted:

"If it is assumed that all the existing electric utility generation facilities are sold by the electric utility to different companies and all the electric utility's firm power purchase agreements are terminated, the HHI analysis of that hypothetical electric market would still indicate that the market would be too concentrated for effective competition. ... Moreover, the effectiveness of competition due to new generators in the future is not too likely, because there are barriers to entry by new competitors. Entry barriers generally are market conditions that make entry more costly or time consuming, and thus, reduce the effectiveness of potential competition as a constraint on the pricing behavior of existing firms."

HECO is simultaneously arguing that an HHI of 1444-2730 is too high for meaningful competition in the electric industry (PUC DN 96-0493) while arguing that an HHI of over 5000

for the CHP market is fine (PUC DN 03-0371). This argument is less than credible. It is more likely that HECO finds an HHI of 1444-2730 to high for competition because HECO already controls the market and wants to show why competition would not work, while an HHI of 5000+ is fine because HECO is not in the market yet but wants to take control of the market.

HECO's position on entry barriers is also less than credible. HECO argued that restructuring central generation would not work because entry barriers would prevent meaningful competition. Yet HECO excludes this analysis in their attempt to seize control of the Distributed Generation market.

7. HECO seeks regulatory approval to adopt a tariff which violates state law

HECO's proposal, as noted in the below quotes from the Evidentiary Transcript, contradicts state law. HRS §269-16(a)

"All rates, fares, charges, classifications, schedules, rules, and practices made, charged, or observed by any public utility, or by two or more public utilities jointly, shall be just and reasonable and shall be filed with the public utilities commission. The rates, fares, classifications, charges, and rules of every public utility shall be published by the public utility in such manner as the public utilities commission may require, and copies furnished to any person on request."

MODERATOR HEMPLING: Will there be an argument by the company at the time of review that the price cannot be made public because it's a business confidence matter?

MR. SEU: Well, there are certain confidential factors, such as what the thermal fee will be for that particular customer because that is a competitive issue between offers, but that's the only -- that's, basically, the only item we've identified as being of confidential nature. Of course, we would share that with the Commission and the Consumer Advocate. (*Evidentiary Hearing Transcript. Volume III. December 10, 2004. p. 133, lines 9-18*)

Questions by HECO Attorney Mr. Williams
Answers by HESS Attorney Ms. Wong

Q. The utility's price to begin with is approved by the Commission?

A. Correct.

Q. Any change in the price would be approved by the Commission?

A. That is correct.

Q. Third-party prices, the Commission has no review whatsoever; is that correct?

A. That's correct.

Q. The third-party competitors will know what the utility's prices are because they're filed publicly with a minor amount of variation in the thermal fee; is that correct?

A. Yes. And - but let's make it distinct. Mr. Seu did say that you, the utility, will treat the thermal price as proprietary, and although he offered that the utility might be willing to offer it to the Commission or the Consumer Advocate, I have seen in the past where the utility has argued that, you know, we really - we don't want to set the precedent because, you know, this would be anti-competitive for use and we do not

want to offer this information.

Q. Yeah. A filed tariff would require the company to provide the information to the Commission, wouldn't it?

A. Would that include the thermal price?

Q. Yes.

A. Well, then I guess I misunderstood Mr. Seu's testimony where Mr. Seu said that the thermal price is proprietary information. Now, if you're telling me your client is willing to lay out every component of their price to their customer, the basis for that price and if a third-party disagreed with it and had a mechanism to come to the Commission, you know, they filed a motion to intervene to argue that point, we have no problem.

Q. The thermal price is fixed in the tariff plus or minus 50 percent, where the actual thermal charge will be filed with the Commission under protective order. That's exactly what the tariff states.

A. All right. But you're saying that -- you're saying that -- that was not your question. You had said that the thermal price is public, but now your question.

Q. I said it was provided to the Commission.

A. Under protective order. You're saying protective order now?

Q. Yes.

A. That's not what you said originally.

Q. I said, as it's provided to the Commission?

A. But now you're putting the caveat that it's being provided to the Commission under protective order. I mean, there's two different things. If a document is provided to the Commission without a protective order, that means anyone can go to the Commission and review the document. Now, if you're saying a document is provided to the Commission under a protective order, that's a different situation because the public would not have access to that information.

Q. Thank you. You've made your point, but it is provided to the Commission, isn't it?

(Evidentiary Hearing Transcript. Volume III. December 10, 2004. page 175, line 17 - page 176, line 15)

8. HECO seeks regulatory approval for their energy policy which violates a constitutional mandate

The Constitution calls for energy-self-sufficiency. In Hawai'i this would mean basing our energy future on renewable energy. HECO uses oil to generate well over 99% of their electricity. HECO has sought to abuse the definition of renewable energy by suggesting that oil-based heat is renewable. The use of Orwellian language will certainly not lead the state to energy-self-sufficiency. Importing foreign oil will not lead to self-sufficiency. HECO's CHP Application and their current Integrated Resource Planning process shows their commitment to continued reliance on fossil fuel and abuse of the state constitution.

Twenty-seven years ago the State Constitution was amended so that the state would become energy self-sufficient. Fortunately the Commission has taken some bold steps in the last couple of years to move in this direction. *(See: PUC Decisions re Hawi, South Point, Kaheawa Pastures)*. The PUC must now take another bold step.

9. The Consumer Advocate is in total support of all utility positions in this docket

"The Consumer Advocate ... provided a matrix setting forth the issues and indicating specifically where there was agreements or disagreements between the Consumer Advocate, HECO, HELCO, and MECO (therein collectively referred to as "HECO"), and KIUC ... The Consumer Advocate, HECO and KIUC agree on all issues with the exception of those few issues that either the Consumer Advocate, HECO or KIUC took no position" (CA Brief p. 6)

We encourage the Consumer Advocate to read the State Constitution, to reflect on the current price of oil (over \$50/barrel), to note broad-based consumer support for renewable energy policies, and to note that market abusers often uses subtle techniques. Furthermore shifting to renewable energy resources is simply smart economics.

People are part of the environment. They oppose the continued reliance on fossil fuels, the continued reliance on central station power plants and the imposition of high-voltage transmission lines through communities that these plants require. Renewable Distributed Generation solves all of these hassles.

10. The PUC should support DG in general, and renewable DG in particular

All parties believe that Distributed Generation is beneficial. Renewable DG allow more money to stay in the local economy while decreasing pollution levels, cutting back on global warming gases and complying with the State Constitution.

11. The PUC should reject utility DG

The threshold question in this docket is a simple one: Should utilities be able to own Distributed Generation? The utilities have had 27 years to shift to renewable energy resources. They have talked the talk, but their walk has been horrendous. Today we are further away from energy-self-sufficiency than we were when we mandated it in our constitution. To effectuate the shift to renewable DG we must have a policy whereby any renewable facility which can meet or beat the price of fossil fuel power plants is placed at the front of the line. This is what the People's Republic of China just did. See Attachment.

Summary

We are asking the PUC to be mindful of the ripple effects that will be caused by the Commission's Decision in this docket. We have the opportunity to move towards self-sufficiency, and to increase the quality of life for all people. The Commission must support Renewable-Based Distributed Generation.

March 24, 2005

Henry Q Curtis
Executive Director

Renewable energy given priority

Chen Hong. China Daily Updated: 2005-03-23 06:27

An eagerly anticipated law on the usage of renewable energy will come into force in January 2006. The Law of Renewable Energy was recently passed by the NPC. Feng Zhijun is vice-chairman of the Committee on Environmental and Resources Protection of the National People's Congress (NPC) and a member of the group which drafted the law. He believed it will significantly promote the development of renewable energy in China.

"By setting out the rights and responsibilities of all related parties, the law will boost market demand for renewable energy and improve the confidence of investors," said Feng in an interview with the People's Daily.

The "renewable energy" mentioned in the law is non-fossil energy, such as wind, solar, hydro and geothermal energy.

The law stipulates that the State will list the development and usage of renewable energy as a priority in energy development. And the State will also take the necessary measures to promote development in this regard. It is also stressed that all players are encouraged to participate in exploring and developing renewable energy. Investors' rights and interests will be protected. Both statements serve as an explicit "go-ahead" signal for would-be investors.

The law is interesting too because it talks about getting electricity from renewable sources. Electricity generated in this way usually costs more to make for various reasons including limits in technology or the small scale of production. This is the major obstacle preventing sourcing electricity from renewable sources.

It is nearly impossible for the electricity to be sold if it has to compete with electricity from traditional sources like

hydropower stations or thermal power plants. As a result, electricity companies using renewable energy do not survive in the market. Now, according to the Law of Renewable Energy, the central government will set prices for electricity from renewable sources according to the source types.

Power grid operating companies will have to buy the electricity generated in their neighbouring renewable energy power houses.

Any extra costs incurred by the grid companies will be added to the price of electricity generated by all means and shared by all electricity users. These arrangements are in line with widely-accepted practices around the world and have proven to be effective ways to promote the development of renewable energy. Zhou Fengqi, the former director of the Energy Research Institute under the National Development and Reform Commission, said the price arrangements are conducive to the law's promotion of the use of renewable energy.

"The law has mapped out a market for renewable energy with mandatory legal stipulations," Zhou said. "Under such arrangements, extra costs will be paid by all electricity users and the electricity from renewable energy will have a considerable market. This way, the renewable energy power houses will be able to develop better technology, reduce production costs and realize further development." Zhou added that the fast boom of renewable energy in the European Union has a lot to do with similar tactics in countries there, especially Germany, Spain and Denmark.

Detailed rules of implementation are currently being worked out by the State Council and related departments. These will be legally binding when done. One of the most anticipated issues to be addressed by the rules is what proportion of China's energy consumption should come from renewable energy by 2020.

Some media reports say the figure will be around 10 per cent, with the current figure being about 3 per cent. Some of the consumption is in a traditional way, such as the burning of straw and firewood, which is not encouraged for its negative environmental impact.

The target of what proportion of energy will be renewable energy was not included in the Law of Renewable Energy, because legislators thought the law should be consistent and as stable as possible rather than be revised from time to time, according to Zhou Fengqi. Therefore, the specific target will be dealt with in the rules of implementation. ...

Certificate of Service

I hereby certify that I will serve each of the parties using the time-frame set by the Commission, Monday, March 28, 2005.

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March 24, 2005

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