<u>SB715 SD1</u>

Measure Title: RELATING TO RENEWABLE STANDARDS.

Report Title: Renewable Portfolio Standards; Energy Independence; Large Self-generator; Clean Energy Initiative

Defines "large self-generator". Increases renewable portfolio standards to seventy per cent by 12/31/2035 and one hundred per cent by 12/31/2040, unless the acquisition of renewable energy is not beneficial to Hawaii's economy. Establishes renewable standards for new large self-generators. Subjects new large self-generators to applicable renewable standards. Clarifies and establishes events or circumstances that are outside of an electric company's or new large self-generator's reasonable control. Establishes new large self-generator reporting requirements to the public utilities commission. Requires the public utilities commission to report on cost-effectiveness of renewable portfolio standards to address the impact on renewable energy developer energy prices. (SD1)

| Companion: | <u>HB623</u> |
|-------------------|--|
| Package: | None |
| Current Referral: | ENE, CPN |
| Introducer(s): | GABBARD, KIDANI, Keith-Agaran, Ruderman, Wakai |

| Sort by Date | | Status Text |
|-----------------|---|--|
| 1/23/2015 | S | Introduced. |
| 1/26/2015 | S | Passed First Reading. |
| 1/28/2015 | S | Referred to ENE, CPN. |
| 1/30/2015 | s | The committee(s) on ENE has scheduled a public hearing on 02-03-15 2:45PM in conference room 225. |
| 2/3/2015 | S | The committee(s) on ENE recommend(s) that the measure be PASSED, WITH AMENDMENTS. The votes in ENE were as follows: 2 Aye(s): Senator(s) Gabbard, Ihara; Aye(s) with reservations: none ; 1 No(es): Senator(s) Slom; and 2 Excused: Senator(s) Green, Galuteria. |
| 2/9/2015 | s | Reported from ENE (Stand. Com. Rep. No. 36) with recommendation of passage on Second Reading, as amended (SD 1) and referral to CPN. |
| 2/9/2015 | S | Report adopted; Passed Second Reading, as amended (SD 1) and referred to CPN. |
| 2/27/2015 | S | The committee(s) on CPN will hold a public decision making on 03-04-15 10:00AM in conference room 229. |



DAVID Y. IGE GOVERNOR

SHAN S. TSUTSUI LT. GOVERNOR STATE OF HAWAII OFFICE OF THE DIRECTOR DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS

> 335 MERCHANT STREET, ROOM 310 P.O. Box 541 HONOLULU, HAWAII 96809 Phone Number: 586-2850 Fax Number: 586-2856 www.hawaii.gov/dcca

TO THE SENATE COMMITTEE ON COMMERCE AND CONSUMER PROTECTION

THE TWENTY-EIGHTH LEGISLATURE REGULAR SESSION OF 2015

WEDNESDAY, MARCH 4, 2015 10:00 a.m.

TESTIMONY OF JEFFREY T. ONO, EXECUTIVE DIRECTOR, DIVISION OF CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, TO THE HONORABLE ROSALYN H. BAKER, CHAIR, AND MEMBERS OF THE COMMITTEE

SENATE BILL NO. 715, S.D. 1 - RELATING TO RENEWABLE STANDARDS

DESCRIPTION:

This measure proposes to define "large self-generator;" increase Hawaii's Renewable Portfolio Standards ("RPS") to 70 percent by December 31, 2035 and 100 percent by December 31, 2040, unless the acquisition of renewable energy is not beneficial to Hawaii's economy; establish renewable standards for large self-generators and subject large self-generators to applicable renewable standards; proposes to clarify and establish events or circumstances that are outside of an electric company's or large self-generator's reasonable control; establish large self-generator reporting requirements to the Public Utilities Commission ("PUC") and require the PUC to report on cost-effectiveness of RPS to address the impact on renewable energy developer energy prices.

POSITION:

The Division of Consumer Advocacy supports the intent of this bill and offers the following comments.

CATHERINE P. AWAKUNI COLÓN DIRECTOR

JO ANN M. UCHIDA TAKEUCHI DEPUTY DIRECTOR Senate Bill No. 715, S.D. 1 Senate Committee on Commerce and Consumer Protection Wednesday, March 4, 2015, 10:00 a.m. Page 2

COMMENTS:

The Division of Consumer Advocacy supports the integration of increasing levels of renewable energy and acknowledges the benefits of "stretch" goals in order to encourage action.

Hawaii Revised Statutes § 269-95 requires the PUC to provide a report to the Legislature every five years on the Commission's evaluation of the RPS and whether the standards remain effective and achievable. The Commission will produce studies, such as the one recently conducted by General Electric ("GE"), which suggest that it is *possible* that Hawaii will be able to meet its 40% RPS goal if certain challenges and uncertainties are addressed. The GE study also suggests that greater levels of renewable energy may be possible, but these higher levels of renewable energy are associated with measures that need to be further evaluated (e.g., interisland electric transmission cable, renewable energy projects at sites where communities have already expressed objection). The GE study would suggest that we should proceed cautiously when attempting to set higher RPS goals that go beyond 2030.

On the other hand, Hawaiian Electric Co.'s Power Supply Improvement Plans ("PSIPs") filed with the PUC on August 26, 2014, indicated that Hawaiian Electric would not only meet the 40 percent RPS by 2030, but it could reach a 65 percent RPS even without an undersea transmission cable. Although the PSIPs have not yet been fully vetted in the PUC proceeding, Hawaiian Electric's analysis of reaching a 65 percent RPS by 2030 would suggest that even higher RPS goals beyond 2030 are achievable.

The Consumer Advocate supports the intent of this bill to have the State's electric utilities adopt higher RPS goals beyond 2030. Furthermore, the Consumer Advocate supports the provision in this bill that defines "large self-generator" and applies the RPS standard to such large self-generators.

Thank you for this opportunity to testify.

TESTIMONY OF RANDY IWASE CHAIR, PUBLIC UTILITIES COMMISSION STATE OF HAWAII TO THE SENATE COMMITTEE ON COMMERCE AND CONSUMER PROTECTION

MARCH 4, 2015 10:00 a.m.

MEASURE: S.B. No. 715, S.D.1 TITLE: Relating to Renewable Standards

Chair Baker and Members of the Committee:

DESCRIPTION:

This measure seeks to extend the existing renewable portfolio standards ("RPS") to 70% of an electric utility's net electricity sales by the end of 2035 and 100% of an electric utility's net electricity sales by the end of 2040. This measure also seeks to establish a RPS for non-utility "large self-generators." "Large self-generators" would be subject to Public Utilities Commission ("Commission") regulation and penalties.

POSITION:

The Commission offers the following comments for the Committee's consideration.

COMMENTS:

The Commission takes no position on the language extending RPS benchmarks for electric utilities.

The Commission raises a concern with the language that establishes RPS benchmarks for "large self-generators." The jurisdiction of the Public Utilities Commission has always been limited exclusively to public utilities. "Large self-generators," as defined by this measure, could include both utility customers and off-grid entities. Expanding the Commission's jurisdiction would require additional staffing and funding.

Thank you for the opportunity to testify on this measure.

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

No. 1 Capitol District Building, 250 South Hotel Street, 5th Floor, Honolulu, Hawaii 96813 Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804 Web site: www.hawaii.gov/dbedt

DAVID Y. IGE GOVERNOR

LUIS P. SALAVERIA DIRECTOR

MARY ALICE EVANS DEPUTY DIRECTOR

Telephone: (808) 586-2355 Fax: (808) 586-2377

Statement of LUIS P. SALAVERIA Director Department of Business, Economic Development, and Tourism before the SENATE COMMITTEE ON COMMERCE AND CONSUMER PROTECTION Wednesday, March 4, 2015 10:00 a.m.

State Capitol, Conference Room 229

in consideration of SB 715, SD 1 **RELATING TO RENEWABLE STANDARDS.**

Chair Baker, Vice Chair Taniguchi, and Members of the Committee.

The Department of Business, Economic Development, and Tourism (DBEDT) respectfully offers comments on SB 715, SD1, which requires the electric utility companies to develop a Renewable Portfolio Standard (RPS) goal of 70% and 100% for 2035 and 2040 respectively and the Public Utilities Commission (PUC) to investigate the feasibility of updating and extending the RPS requirements to include large self-generators.

DBEDT supports the purpose of this bill to achieve total energy independence for Hawaii and reiterates the Administration's intent to achieve a 100% renewable energy portfolio in the electricity sector. DBEDT asserts, however, that immediate actions and investments by the electric utilities to achieve bold goals over the next 5 to 15 years will drive the growth of the renewable market in Hawaii, and this measure does not address an accelerated schedule from today to go beyond 40% renewable by 2030. We point out that Hawaii is nearly 5% beyond its interim 2015 goals and Hawaiian Electric Industries (HEI) Companies has charted a Preferred

Plan that achieves 67% renewable by 2030 in its recent Power Supply Improvement Plan. We are working with the HEI Companies on setting a more optimal path from the ratepayer perspective to get there, but we agree with the RPS target of the HEI Companies' Preferred Plan. Accordingly, I have directed the Administrator of the State Energy Office to convene energy stakeholders in the coming weeks to chart such an accelerated renewable path as a key objective of the Ige Administration.

The Hawaii RPS has been the glue for binding a common resolve among energy stakeholders in our quest for energy independence. The RPS has helped grow Hawaii's clean energy economy while offsetting higher electricity rates by methodically backing out the volatility of oil which provides immediate and long term benefits to ratepayers. Clearly, the State is capable of going well beyond 40% renewable by 2030 and we would not recommend changes to the RPS unless it accelerated the path to Hawaii's energy transformation, instead of holding the course for now and placing new aspiration goals 20 years into the future.

Thank you for the opportunity to offer these comments.



Testimony of George Szigeti President & CEO HAWAI'I LODGING & TOURISM ASSOCIATION Committee on Commerce and Consumer Protection Hearing on March 04, 2015 SB 715 S.D. 1 Relating to Renewable Standards

Dear Chair Baker, Vice Chair Taniguchi, and Members of the Committee. My name is George Szigeti and I am the President and CEO of the Hawai'i Lodging & Tourism Association.

The Hawai'i Lodging & Tourism Association (HLTA) is a statewide association of hotels, condominiums, timeshare companies, management firms, suppliers, and other related firms that benefit from and strengthen Hawai`i's visitor industry. Our membership includes over 150 lodging properties, representing over 50,000 rooms, and over 400 other Allied members. The visitor industry was responsible for generating \$14.9 billion in visitor spending in 2014 and supported 170,000 jobs statewide – we represent one of Hawai`i's largest industries and a critical sector of the economy.

On behalf of HLTA, permit me to offer these comments regarding SB 715 S.D. 1 relating to Renewable Standards, which defines "large self-generator". Increases renewable portfolio standards to seventy per cent by 12/31/2035 and one hundred per cent by 12/31/2040, unless the acquisition of renewable energy is not beneficial to Hawaii's economy. Establishes renewable standards for new large self-generators. Subjects new large self-generators to applicable renewable standards. Clarifies and establishes events or circumstances that are outside of an electric company's or new large self-generator's reasonable control. Establishes new large self-generator reporting requirements to the public utilities commission. Requires the public utilities commission to report on cost-effectiveness of renewable portfolio standards to address the impact on renewable energy developer energy prices.

The Hawai'i Lodging & Tourism Association supports the intent of this bill as it works towards a renewable energy future, however, we are **opposed** to imposing the proposed standards on large self-generators. We feel that if passed, this measure will have unintended consequences on cogeneration systems (a.k.a. Combined Heat and Power generators or CHP's), micro grid developers and others such as hotels, hospitals, school and large landowners who are still planning to use liquefied natural gasses (LNG's) to drive their generation in effect.

There are several hotels, hospitals, schools and other facilities that plan to install LNG fueled onsite generation greater than 500 kilowatts. These projects are heavily consisted of CHP systems which are used to reduce the demand for electricity as they operate at energy efficiency levels of 60% to 90% making them the most efficient way to convert fossil fuels into usable forms of energy. Requiring these facilities to meet the proposed renewable portfolio standard will reduce the economic benefit of these projects, as well as slowing or even preventing implementation of this technology.

For these reasons we urge you to please consider deleting requirements as they pertain to large-self generators from this Bill.

Thank you for this opportunity to testify.

Testimony before the Senate Committee on Commerce & Consumer Protection

March 4, 2015, 10:00 am Conference Room 229

SB 715, SD 1 – Relating to Renewable Standards

By Scott Seu Vice President, System Operation Hawaiian Electric Company, Inc.

Chair Baker, Vice-Chair Taniguchi and Members of the Committee:

My name is Scott Seu. I am Vice President for System Operation at Hawaiian Electric Company. I am testifying on behalf of Hawaiian Electric and its subsidiary utilities, Maui Electric and Hawaii Electric Light (collectively "Companies").

The Companies support the purpose and intent of Senate Bill 715, SD 1 ("SB 715, SD 1") with respect to: (1) updating and extending Hawaii's renewable portfolio standards ("RPS"); and (2) ensuring that electricity from on-site generation not purchased from an electric utility, both on and off-grid, is subject to the same renewable standards as electric utilities.

With respect to updating and extending Hawaii's RPS, SB 715, SD 1 proposes to increase renewable portfolio standards to 70% by 2035 and 100% by 2040. The Companies respectfully request that the Committee consider amending SB 715, SD 1 to include language that would require analysis and consideration of the economic benefits that would result if the 2035 and 2040 RPS goals are achieved. To that end, the Companies suggest including language in the amendments to HRS § 269-92 similar to that currently contained in the preamble of the SB 715, SD 1 which states "extending the renewable portfolio standard... beyond 2030 shall be undertaken in a manner that benefits Hawaii's economy and all electric customers, maintains customer affordability, and does not induce renewable energy developers to artificially increase the price of renewable energy in Hawaii."

Additionally, while we believe we will be well on our way to greater than 65% RPS by 2030 if we are able to execute the plans that we've filed with the PUC, reaching 100% RPS by 2040 may prove to be very aggressive given that we'd need to ramp up the final 30% RPS in only a five year timeframe; hence the Committee should consider extending the 100% RPS target to 2050, as was proposed in the 2014 Legislative session.

The Companies also strongly support the requirement that electricity from large selfgenerators be subject to the same renewable standards as electricity generated by electric utilities. This will level the playing field and eliminate a loophole in existing law that allows large self-generators to bypass the purpose and intent of Hawaii's RPS, i.e. reducing Hawaii's long term dependence on imported fuel. The Companies also note that further consideration may be required in relation to: (1) whether SB 715, SD 1 should include exceptions for large self-generators that are used solely for emergency or backup power; (2) appropriate size thresholds for large-self generators; and (3) whether the Public Utilities Commission has jurisdiction over non-utility entities such as large self-generators.

Thank you for this opportunity to testify.



Testimony Before the Senate Committee on Commerce and Consumer Protection

By Michael Yamane, P.E. Chief of Operations Kauai Island Utility Cooperative 4463 Pahee Street, Suite 1, Lihue, Hawaii, 96766-2000

> Wednesday, March 4, 2015, 10:00 a.m. Conference Room #229

Senate Bill No. 715, SD1 – Relating to Renewable Standards

To the Honorable Rosalyn H. Baker, Chair; Brian T. Taniguchi, Vice-Chair, and Members of the Committee:

Kauai Island Utility Cooperative ("KIUC") would like to offer testimony on SB 715, SD1.

The No. 1 priority for the 26,000 members of our cooperative is lower electric bills. They have been clear that they do not endorse a "renewables at any cost" approach.

By the end of this year, 40 percent of Kauai's energy will come from renewable resources, a huge accomplishment, especially when considering we were at about 5 percent in 2009.

For the next 60 percent, KIUC is looking at a mix of renewables, biofuels, energy storage and fossil fuels. KIUC believes in a diversified approach to power generation and that no reasonable options should be excluded.

A KIUC strategic goal of achieving 50% renewable generation by 2023 was set by our elected board of directors and was not the result of a legislative mandate. An increase to the existing State RPS requirement could have unintended consequences for the members of KIUC.

KIUC also questions the necessity of such legislation on an electric cooperative, whose members annually elect the directors and who participated in the creation of the 2013-2025 Strategic Plan, which is available at http://www.kiuc.coop/content/strategic-plan.

The plan reflects key goals that include decreasing the average bill by 10 percent, reducing carbon emission levels to 1990 levels and, as previously stated, generating at least 50 percent of Kauai's electricity by using renewable resources.

Comments on SB 715, SD1 Page 2

While a goal of achieving 100% renewable generation is laudable, perhaps it should be done through a resolution and not in state law.

Thank you for your consideration.



Directors

Jody Allione Project Development Consultant

Joe Boivin Hawaii Gas

Kelly King Pacific Biodiesel

Warren S. Bollmeier II WSB-Hawaii

TESTIMONY OF WARREN BOLLMEIER ON BEHALF OF THE HAWAII RENEWABLE ENERGY ALLIANCE BEFORE THE SENATE COMMITTEE ON COMMERCE AND CONSUMER PROTECTION

SB 715 SD1, RELATING TO RENEWABLE STANDARDS

March 4, 2015

Chair Baker, Vice-Chair Taniguchi and members of the Committee, I am Warren Bollmeier, testifying on behalf of the Hawaii Renewable Energy Alliance (HREA). HREA is an industry-based, nonprofit corporation in Hawaii established in 1995. Our mission is to support, through education and advocacy, the use of renewables for a sustainable, energy-efficient, environmentally-friendly, economically-sound future for Hawaii. One of our goals is to support appropriate policy changes in state and local government, the Public Utilities Commission and the electric utilities to encourage increased use of renewables in Hawaii.

The purposes of SB 715 SD1 are to: (i) define "large self-generator"; (ii) increase renewable portfolio standards to seventy per cent by 12/31/2035 and one hundred per cent by 12/31/2040, unless the acquisition of renewable energy is not beneficial to Hawaii's economy; (iii) establish renewable standards for new large self-generators; (iv) subject new large self-generators to applicable renewable standards; (v) clarify and establish events or circumstances that are outside of an electric company's or new large self-generator's reasonable control; (vi) establish new large self-generator reporting requirements to the public utilities commission; and (vii) require the public utilities commission to report on cost-effectiveness of renewable portfolio standards to address the impact on renewable energy developer energy prices.

HREA opposes this measure as written for following reasons.

- <u>Large Self-Generator Oppose</u>. We recommend deleting this sections 2, 3, 4 (b) and all other references to "large self-generator", for these reasons:
 - a) We believe customers should be free to exercise their choice of technology for on-site generation, and thus mandating such choice must be renewable is not appropriate.
 - b) We held a similar position regarding the mandate for solar hot water systems in new residential homes, and note that many customers have elected PV or gas options, as permitted by Act 204 of Session Laws 2008.
 - c) Given the above, there is no reason to establish a portfolio standard for such customer projects. `.,,.
- Energy Independence Support. It is clear to us that we would not have reached our current level of renewables in Hawaii if we had <u>not</u> mandated it. Thus, if we are to reach a RPS of 100%, we need to mandate it.
- 3) <u>Recommendations</u>: Please pass out this measure with our recommended deletions.

Mahalo for this opportunity to testify.



Email: communications@ulupono.com

SENATE COMMITTEE ON COMMERCE & CONSUMER PROTECTION Wednesday, March 4, 2015 — 10:00 a.m. — Room 229

Ulupono Initiative <u>Supports</u> SB 715 SD 1 <u>with an Amendment</u>, Relating to Renewable Standards

Dear Chair Baker, Vice Chair Taniguchi, and Members of the Committee:

We are Murray Clay and Kyle Datta, respectively Managing Partner and General Partner of the Ulupono Initiative, a Hawai'i-based impact investment company that strives to improve the quality of life for the people of Hawai'i by working toward solutions that create more locally grown food, increase clean, renewable energy, and waste reduction. We believe that self-sufficiency is essential to our future prosperity, and will help shape a future where economic progress and mission-focused impact can work hand in hand.

Ulupono <u>supports</u> **SB 715 SD 1 with Amendment**, which increases the renewable portfolio standards to 70% in 2035 and 100% in 2040, because it aligns with society's goal of producing more clean, renewable energy in Hawai'i.

SB 715 SD1 improves the current renewables standards statute in two important ways:

(1) Establishing, for the first time, energy targets beyond 2030;

(2) Empowering the PUC to waive compliance with those targets, if utilities are unable to "acquire sufficient renewable electrical energy to meet the 2035 and 2040 renewable portfolio standard goals in a manner that is beneficial to Hawai'i's economy in relation to comparable fossil fuel resources."

Our first proposed amendment would remove the requirement of large self-generators from having to meet RPS targets. Our rationale is that, as a policy, the Renewable Portfolio Standards are designed to provide goals, incentives, and penalties for regulated utilities. Applying this policy to unregulated self-generation by commercial or industrial companies is not only reaching, but can lead to unintended consequences.

The reality for many of our resorts is while they have high electricity, heating, and cooling demands, they have relatively few available vacant real estate. As a matter of good energy policy and economic development, we want these larger users to adopt more efficient onsite generation, and lower the total use of fossil fuels. If they had to adopt an RPS standard,

Investing in a Sustainable Hawai'i



they would be limited in the amount of self-generation by their rooftop space. For example, the Mauna Lani on the Big Island utilized nearly all their rooftop space for solar, but still is only able to generate less than 30% of their total energy load.

Ulupono pragmatically recognizes that with the current technologies available, we can technically obtain 100% renewables, but the last 10-20%, depending on the county, would come at a great cost. No party will be able to accurately predict what future technologies may be available in 2040 or 2045. Thus, this bill allows the PUC to waive the targets should it not be beneficial to Hawai'i ratepayers.

Our second proposed Amendment is that Section 269-95 (3)(A) (page 11 line 7 to page 12 line 6) include "the cost of fossil fuel volatility" as an additional factor to assess when the study is conducted to determine the cost effectiveness of achieving the renewable portfolio standard.

We believe we need to extend and raise the renewable portfolio standards to force the utility to ask the right questions in the planning process in order to learn how to configure the electrical system to maximize the use of Hawai'i's renewable resources. We are supportive of data-driven methodology to determine future policies and decisions. Since the Renewable Portfolio Standard sets legally mandated targets, which are reflected in other Public Utilities Commission proceedings, this legislative approach will set the right framework.

There are significant economic development benefits from creating this framework. Renewable energy projects create more local jobs, particularly in rural communities. The less money that is exported from the state for fossil fuels means more money to fuel our state's economy. Renewable energy provides certainty in energy costs, which improves the business investment climate necessary for the state to compete in the 21st century. Renewable energy systems are more resilient in the face of natural or man made disasters, which means our islands will recover faster from hurricanes and similar catastrophes.

As Hawai'i's energy issues become more complex and challenging, we appreciate this committee's efforts to look at policies that support renewable energy production.

Thank you for this opportunity to testify.

Respectfully,

Murray Clay Managing Partner Kyle Datta General Partner





SENATE COMMITTEE ON COMMERCE & CONSUMER PROTECTION

March 4, 2015, 10 A.M., Room 229 (Testimony is 1 page long, plus attached fact sheet)

TESTIMONY IN STRONG SUPPORT OF SB 715 SD 1

Chair Baker, Vice-Chair Taniguchi, and members of the Committee:

Thank you for hearing SB 715, which will establish a long-term vision for sustainable energy in Hawai'i. Blue Planet Foundation strongly supports this measure. As detailed in the attached fact sheet, the policy embodied in SB 715 is the right thing to do, for Hawai'i's people, economy, and environment.

However, we wish to express two areas of concern. First, we are very concerned that in the companion House Bill (HB 623) the target date for 100% clean energy has been weakened in HD 1, to 2045. As detailed in the attachment, clean energy is cost-effective and 100% renewable power is achievable long before 2040 (demonstrated, for example, by the results of a recent HECO analysis). Weakening the bill's original vision for energy independence does not serve the people of Hawai'i. We respectfully urge the committee to forward SB 715 SD 1 with its current 100% target date for 2040 or earlier.

Second, we understand that some parties have expressed a concern about the portion of the bill that would require very large self-generators (larger than ½ megawatt) to comply with the same renewable standards as electric utilities. While we believe that this is fair and sensible energy policy, which will ultimately benefit Hawai'i and its key industries such as tourism, we are also cognizant that these industries may presently be unfamiliar with this concept. In light of the urgency for a 100% RPS policy, we believe it would be reasonable to defer the "large-self generator" concept for discussion during another legislative session.

Thank you for hearing this important bill. We respectfully, but urgently, ask you to forward this bill with a 100% renewable standard for 2040 or earlier.

Attachment: 100% Clean Energy Fact Sheet

100% CLEAN ENERGY FACT SHEET

The State of Hawai'i has implemented energy goals using Renewable Portfolio Standards ("RPS"). Those goals, set forth by the legislature in 2009 with Act 155, include generating 40% of our electricity from renewable energy by 2030. However, the current law would allow most of our power (60%) to come from fossil fuels in 2030 and indefinitely beyond. Act 155 expressly acknowledged that it provided only a "first step in aligning Hawai'i's energy policy laws with the State's energy goals." SB 715, HB 623, and HB 1512 are the "next step" and reflect the potential for the legislature to exercise strong leadership and vision. These bills can improve the current renewables standards statute in two important ways:

- (i) Establishing, for the first time, energy targets for beyond 2030;
- (ii) Empowering the PUC to waive compliance with those targets, if utilities are unable to "acquire sufficient renewable electrical energy to meet the 2035 and 2040 renewable portfolio standard goals in a manner that is beneficial to Hawai'i's economy in relation to comparable fossil fuel resources."

This fact sheet provides: (1) a summary of the important reasons why a 100% RPS standard is important; (2) an explanation of the urgent need for this policy; (3) data on the cost-effectiveness and achievability of 100% clean power before 2040; and (4) an explanation of how these bills enhance PUC oversight to ensure that the RPS goals benefit Hawai'i.

1. Summary: Why 100% Clean Energy Matters for Hawai'i

Blue Planet supports the 100% clean energy vision embodied in these bills:

- Clean energy targets protect Hawai'i's people. Fossil fuels are damaging Hawai'i's economy and changing our climate. The least fortunate amongst us are most severely impacted by these changes.
- Renewable energy is cost-effective. In 2014 the PUC reported to the legislature that increased use of renewable energy "is currently effectively reducing costs paid by utility customers." The savings are substantial, exceeding \$66 million in 2012. More recent data shows that clean energy and energy efficiency are successfully de-linking monthly energy bills from volatile fossil fuels prices.
- 100% clean energy is achievable. Hawai'i has the potential to locally generate local at least 3 to 4 times the electricity we currently use, without fossil fuels. Furthermore, in 2014 the HECO Companies released some details of their analysis on energy supply between today at 2030. Although the utilities' preferred plan would achieve approximately 65-70% clean energy by 2030, the HECO Companies' own analysis

included a scenario of 100% clean energy achieved by 2030. Islands of various sizes around the world have <u>already achieved 100% clean energy</u>, using their own mix of local resources. Our local utilities and clean energy companies have the capacity to innovate and make Hawai'i a leader. But without a vision for 100% clean energy, we risk falling behind and digging ourselves deeper into a long addiction to fossil fuels.

- Local energy means local jobs. Even if renewable energy and fossil fuel energy have the same cost per kilowatt-hour, *less* money sent out of the state to import fossil fuels means *more* money in our local economy. Approximately 70% of a monthly electricity bill pays for imported fossil fuels. That money does not benefit the local economy.
- Energy targets are smart policy. The recent PUC Report illustrates the need for a long-term energy vision, recognizing that "implementing renewable resource generation projects requires substantial lead times for project design, financing, siting, regulatory approvals and construction." This lead time issue can be solved by a strong legislative vision for energy in Hawai'i.
- The bills add new tools to the PUC's RPS oversight. HB 623 and SB 715 strengthen the PUC's oversight of RPS standards by providing the PUC with the ability to extend or waive compliance due to an inability to acquire renewable electrical energy in a manner that is <u>beneficial to Hawai'i's economy</u> in relation to comparable fossil fuel resources, and by incorporating the impact of RPS standards on energy costs into the PUC's review.

2. The Urgent Need for a 100% Clean Energy Target

In the past year Hawai'i's electric utilities spent over \$100 Million per month on imported fossil fuels for electricity.¹ All of that cost is passed through to customers. This harsh economic reality requires strong leadership to ensure that our electric utilities are properly driven to reduce fuel consumption. In 2008 the Division of Consumer Advocacy and the Hawaii Electric Companies agreed:

"On behalf of the people of Hawaii, we believe that the future of Hawaii requires that we move decisively and irreversibly away from imported fossil fuel for electricity and transportation and towards indigenously produced renewable energy and an ethic of energy efficiency."²

¹ Data from DBEDT Monthly Energy Trends, updated through September 2014.

² Energy Agreement Among the State of Hawaii, Division of Consumer Advocacy of the Department of Commerce & Consumer Affairs, and Hawaiian Electric Companies (Oct. 2008).

However, six years later, state law does not yet address this need for a "decisive and irreversible" shift away from fossil fuels. The current renewable portfolio standard (RPS) would allow for fossil fuels to generate the most (60%) of our electricity, indefinitely beyond 2030.

On top of the staggering monthly expenditure, imported fossil fuels also exhibit volatile shortterm price spikes and dips, overlying a long-term trend of steadily rising fuel costs. **These fundamental characteristics of fossil fuels hurt the most vulnerable of Hawai'i's residents most severely**; e.g. those on a fixed-income, or with little room in the monthly budget for fluctuating energy costs. These are the individuals and communities most in need of improved policy.

The same is true of climate change, which is also caused by fossil fuels. The most recent report of the Intergovernmental Panel on Climate Change stated: "Climate change will amplify existing risks and create new risks for natural and human systems. Risks are unevenly distributed and are generally greater for disadvantaged people and communities in countries at all levels of development."³ For Hawai'i and the Pacific region, climate change impacts are already being observed, such as rising air temperatures (particularly at high elevations where Hawai'i's rain forms), less frequent rain but more intense rain storms, lower stream flow, more extreme weather, and warmer, more acidic, rising oceans.⁴

The panel of experts cautioned that "[c]ontinued emission of greenhouse gases will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive, and irreversible impacts for people and ecosystems. Limiting climate change would require substantial and sustained reductions in greenhouse gas emissions which, together with adaptation, can limit climate change risks."⁵

By establishing a strong, yet reasonable, Renewable Portfolio Standard (RPS) policy, SB 715, HB 623, and HB 1512 are an opportunity for Hawai'i's lawmakers to take a stand against climate chance, and in favor of our most vulnerable citizens. Hawai'i needs a long-term energy vision. Hawai'i needs the benefits of 100% local, renewable, sustainable power. **Hawai'i needs the Legislature to act before it is too late.**

³ Intergovernmental Panel on Climate Change, 2014 Synthesis Report, Summary for Policy Makers ("IPCC Report"), SPM 2.3.

⁴ See Climate Change and Pacific Islands: Indicators and Impacts, Executive Summary of the 2012 Pacific Islands Regional Climate Assessment (2012), at 2.

⁵ IPCC Report at SPM 2.

3. Cost-Effectiveness and Achievability of a 100% Clean Energy Target

In light of the Public Utilities Commission (PUC) report to the 2014 Legislature on a review of the Renewable Portfolio Standards (RPS), it is becoming increasingly apparent that a 100% clean energy target is cost-effective, achievable, and needed.

A. According to the PUC, Renewable Energy is Saving Money for Hawai'i Residents and Businesses

The PUC Report concluded that "[t]he RPS remains effective in helping the State achieve its policies and objectives with respect to developing renewable energy resources in Hawai'i through the 2030 timeframe."⁶ Among these successes, the PUC Report concluded: **"The increased use of renewable generation resources on Hawai'i's utility systems is currently effectively reducing costs paid by utility customers.**"⁷ According to the PUC's estimate, in 2012 renewable energy generation saved the HECO Companies' customers \$66 million.⁸ Furthermore, the PUC Report notes that the more renewable energy used on each island, the more the HECO Companies' customers saved on fuel costs:⁹



⁶ See PUC 2014 Report to the Legislature on the Renewable Portfolio Standards 2 (Dec. 2013) ("PUC Report"). More specifically, the report concludes that the RPS policy has been effective in two ways: (1) "at increasing the amount of renewable energy generation resources implemented on Hawaii's utility systems"; and (2) "increased utilization of renewable resources is effectively reducing the use of imported oil and, more generally, promoting Hawaii's policies to increase use of indigenous resources while maintaining affordable energy services." *Id.* at 15.

⁸ Id.

⁷ *Id*. at 16.

⁹ See id. at 17, Table 1.

This trend highlights several factors. In 2012, the cost of fossil fuel generation for HELCO (25.4 cents/kWh) and MECO (23.8 cents/kWH) was higher than for HECO (22.6 cents/kWh).¹⁰ Combined with more renewable generation on those islands (38.5% renewables for HELCO, 17.1% for MECO), this means that HELCO and MECO customers saved more money by using more renewables. In this way, RPS standards can help to drive more levelization of total customer rates across different islands.

The PUC Report did not evaluate the deeper impact of these savings on the economy, nor did it quantify the potential impact of future costs and savings.¹¹ But it must be noted that **local clean power can also provide** <u>fixed-cost energy</u>, to protect Hawai'i residents from price spikes. And local clean power also <u>promotes local jobs and infrastructure</u>; even if renewable energy and fossil fuel energy have the same cost per kilowatt-hour, *less* money sent out of the state to import fossil fuels means *more* money in our local economy.

The PUC Report's findings utilized then-available 2012 data. More recent data shows that renewable energy and energy efficiency are successfully lowering energy bills as they are delinked them from the cost of fossil fuels. Data available from the Department of Business, Economic Development & Tourism shows that since 2006, monthly energy bills tracked fossil fuel cost trends very closely. But from 2012 onward, the average monthly energy bill has fallen, deviating from the fossil fuel trend:



¹⁰ *Id*.

¹¹ *Id.* at 17. The PUC report hypothesized, without quantification, that under some variations of a high renewable electric system (i.e. utilizing a high proportion of intermittent renewable power), the cost of grid reliability will increase. However, such costs are not balanced against factors such as additional fuel savings, potential reliability improvements (e.g. removing large "baseload" power plants that presently threaten the reliability of the whole grid if they fail, and replacing them with distributed generation whose failure would not be catastrophic), and other benefits of a renewable energy based system (e.g. reduced commuting costs via the use of electrified transportation).

These economic factors counsel in favor of extending the RPS beyond the 2030 targets, to ensure that Hawai'i's residents and businesses are no longer saddled with the economic burden of imported fossil fuels.

B. Achievability of 100% Renewable Power by 2030 (Ten Years Ahead of the 2040 Target Date)

RPS laws acknowledge that no policy maker has a crystal ball to peer in to the future. Hawai'i's **RPS law requires the PUC to "consider, on an ongoing basis, whether the RPS remain effective and achievable** and whether the RPS requirements need to be amended, reporting findings to the Legislature every five years."¹²

The 2014 PUC Report concluded that 2015 (15%) and 2020 (25%) targets are achievable, based on current and pending renewable developments. The Report did not reach a conclusion on the 2030 (40%) target, due to expected uncertainties such as future utility sales and technical questions. Notably, these uncertainties did *not* lead the Report did not suggest that the 2030 target is unattainable, nor that it is "aspirational." Similarly, it would be false to assume that a 2040 100% target is not viable, merely because of uncertainties 25 years in the future.

Indeed, the PUC Report noted that following the Report's release, "[i]t is expected that more will be known as the results of current studies become available in the months following this Report is provided to the Legislature."¹³ In the months following the report, the PUC ordered the HECO Companies' to conduct detailed energy planning centered on the Commission's inclinations favoring aggressive adoption of renewables. Although the utilities' "preferred plan" in response to that order would achieve approximately 65-70% clean energy by 2030, their analysis also included a scenario of 100% clean energy by 2030.

Considering reliability and other factors, the analysis concluded that achieving 100% clean energy by 2030 would result in electricity rates between 0 to 5 cents more per kWh than the comparable current cost of energy. Coupled with efficiency, this could likely translate into lower total monthly energy bills for consumers. An image from the HECO Companies' PUC filing is included here:¹⁴

¹² *Id*. at 51.

¹³ *Id*. at 52.

¹⁴ See HECO Companies' filing in Docket No. 2014-0183, Information Request 15, page 8 (October 10, 2014).



While Blue Planet may not necessarily concur with all of the utilities' assumptions regarding costs (for example, with respect to assumptions regarding comparative fossil fuels costs),¹⁵ we believe that this analysis by HECO demonstrates the achievability of a 100% RPS target.

The fact that the utilities' "preferred plan" would fall short of the achievable 100% target also illustrates the urgent need for legislative policymaking on the post-2030 future of energy in Hawai'i.

Other islands around the world, such as Iceland (geothermal), El Hierro (wind), and Tokelau (solar) have *already* taken the steps necessary to achieve 100% renewable electricity by optimizing their local energy resources.

Other places are also working to implement RPS standards that would *far exceed* Hawai'i's existing targets. For example:

- The Prime Minister of Aruba has committed to 100% renewable energy by 2020.
- The Governor of Vermont has proposed a 90% RPS, supported by an economic analysis by the state energy office.

¹⁵ In addition, Blue Planet believes that significant customer value can be delivered in a clean energy economy, yielding much lower costs for consumers. For example, an electric utility that helps customers utilize electric vehicles can (i) lower customer commuting costs, while simultaneously (ii) strengthening the grid and lowering the cost of renewable energy. This is the conclusion reached by Dr. Matthias Fripp, at the UH Manoa College of Engineering. Dr. Fripps' work has shown that these types of strategies can vastly lower the cost of renewable energy.

• Germany, Denmark, and Scotland all have renewable energy targets that exceed Hawai'i's.

Such efforts are proving that energy innovation is achievable and affordable. Our state, which is especially burdened by its dependence on imported fossil fuels, should not fall behind.

The targets in these bills are also consistent with the latest in engineering analysis. Engineers from Stanford University and University of California Davis recently reported that "there are no technological or economic barriers to converting the entire world to clean, renewable energy sources. . . . It is a question of whether we have the societal and political will."¹⁶ Their work was premised on a goal that by 2030 all new energy generation would come from renewable sources, and that by 2050 all pre-existing energy production would be converted. Similar to HECO's analysis of 100% renewable energy by 2030, these researchers also concluded that costs would be comparable to today's energy costs.

C. The Need for a Long-Term Energy Vision in Hawai'i

The PUC Report notes "that **implementing renewable resource generation projects requires** <u>substantial lead times</u> for project design, financing, siting, regulatory approvals and construction."¹⁷ Once again, this demonstrates the need for a long-term energy vision.

The problem of long lead-times can be solved by long-term vision. The targets established in these bills would set a trend that **is less aggressive than the trend that would be set by the HECO Companies' proposed plans**, as illustrated in the following chart. The key difference is that these bills establish a long-term target, to ensure continued progress along that trend.

¹⁶ See Jacobsen & Delucchi, *Providing all global energy with wind, water, and solar power*, 39 ENERGY POLICY 1154 (2011); see also http://news.stanford.edu/news/2011/january/jacobson-world-energy-012611.html.

¹⁷ PUC Report at 52.



The coming years are likely to see historic energy-related regulatory decisions that will set the state on its energy course for decades. For comparison, consider that the oldest generating unit in use on Oahu (at the Waiau power plant) was installed in 1947.

Learning from that experience, we see that fossil fuel investments made in 2015 could still be impacting our children, grandchildren, and great-grandchildren in 2083. The Legislature can proactively protect the state's future by setting a vision for an economy powered by local clean energy.

4. SB 715 and HB 623 Strengthen PUC Oversight of the RPS Targets

In addition to establishing, for the first time, energy targets for beyond 2030, SB 715 and HB 623 propose to add two new tools to the PUC's oversight.

First, under the current RPS statute, the PUC may waive or extend compliance with RPS targets for numerous reasons, such as weather, natural disasters, mechanical failure, strikes, and "[i]nability to acquire sufficient cost-effective renewable electrical energy."¹⁸ These bills add another factor: "inability to acquire sufficient renewable electrical energy to meet the 2035 and 2040 renewable portfolio standard goals **in a manner that is beneficial to Hawai'i's economy in relation to comparable fossil fuel resources**."

¹⁸ See H.R.S. § 269-92, -94.

Second, the PUC is mandated to review the RPS targets every five years to ensure that they remain "effective and achievable."¹⁹ This review includes an analysis of "impact on consumer rates."²⁰ The bills strengthen this review, to include "the impact of renewable energy portfolio standards, if any, on the energy prices offered by renewable energy developers."

Together, these two new PUC tools will ensure that the vision established by the legislature will remain viable in the future, irrespective of uncertainties that exist today.

For all of these reasons, we urge you to pass these bills and set a vision for 100% clean electricity in Hawai'i, no later than 2040.

¹⁹ See H.R.S. § 269-95.

²⁰ Id.

Hawai'i Clean Energy Foundation

TO THE SENATE COMMERCE AND CONSUMER PROTECTION COMMITTEE

THE TWENTY-EIGHTH LEGISLATURE REGULAR SESSION OF 2015

WEDNESDAY, MARCH 4, 2015 10:00 a.m. State Capitol, Conference Room 229

TO THE HONORABLE ROSALYN BAKER, CHAIR, THE HONORABLE BRIAN TANIGUCHI, VICE-CHAIR AND MEMBERS OF THE COMMITTEE

SENATE BILL NO. 715 - RELATING TO RENEWABLE STANDARDS

The Hawai'i Clean Energy Foundation <u>strongly supports SB 715</u>, establishing a longterm vision for clean energy in Hawai'i. The State of Hawai'i has established energy goals reflected in its Renewable Portfolio Standards. Those goals, set forth by the legislature in 2009 with Act 155, include generating 40% of our power from renewable energy by 2030. However, we could face a scenario of producing 60% of our energy from <u>imported fossil fuels</u> in 2030 and indefinitely beyond which would not be in the best interest of Hawai'i's environment or kama'aina.

Since Act 155 expressly acknowledged that it provided only a "first step in aligning Hawai'i's energy policy laws with the State's energy goals." House Bill 623 is the "next step" and reflects the potential for <u>energy leadership and vision by the legislature</u>.

The 2040 goal as written in this legislation is definitely achievable and would not only indicate Hawai'i's leadership in Clean Energy, but would diversify and keep billions of dollars in our State's economy, create thousands of jobs, dramatically improve our energy security and independence, and most importantly improve the quality of life for everyone in Hawai'i.

Thank for the opportunity to submit testimony on this critical piece of legislation before your committee.

| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | leslie.cole-brooks@hsea.org |
| Subject: | *Submitted testimony for SB715 on Mar 4, 2015 10:00AM* |
| Date: | Monday, March 02, 2015 10:08:47 AM |

Submitted on: 3/2/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------------|------------------------------------|-----------------------|-----------------------|
| Leslie Cole-Brooks | Hawaii Solar Energy Association | Support | No |

Comments:

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.



Lance N. Tanaka Director, Government & Public Affairs

TESTIMONY OPPOSING SENATE BILL 715, SENATE DRAFT 1, RELATING TO RENEWABLE STANDARDS

Senate Committee on Commerce and Consumer Protection The Honorable Rosalyn Baker, Chair The Honorable Brian Taniguchi, Vice Chair Wednesday, March 4, 2015, 10:00 a.m., State Capitol, Room 229

Chair Baker, Vice Chair Taniguchi and members of the Committee,

Thank you for this opportunity to present written testimony in opposition to Senate Bill 715, Senate Draft 1, Relating to Renewable Standards. My name is Lance Tanaka, director of government and public affairs for Hawaii Independent Energy, LLC ("HIE"). HIE is a subsidiary of Par Petroleum Corporation and operates the state's largest petroleum refinery in Kapolei, Hawaii.

HIE opposes provisions in this bill that define large self-generators and establish renewable standards for self-generators that are put into service after July 1, 2015. While amendments made by the Senate Committee on Energy & Environment alleviate the impact on HIE's existing co-generation unit, Senate Draft 1 suggests that new and perhaps even replacement self-generator units installed after the effective date may be covered by the proposed renewable standards.

The co-generation unit is an essential tool that not only supplies power at the HIE refinery, it also enables HIE to balance its refining operation with regard to varying supplies of jet fuel, diesel, naphtha and other byproducts. The byproducts are used interchangeably as fuel to run the co-gen unit. Switching to a fixed fuel in order to comply with the proposed renewable standards is not an option. Being regulated by renewable standards will mean a change in fuel basis for HIE, which the company should not be forced to do. HIE would be required to import a different fuel and forced to export products that would otherwise be used to fuel the co-gen.

Additionally, this bill will require operators of large self-generators – not just electric utilities, but non-utility companies such as HIE that generate their own electrical power and sell excess electricity to the power utility – to go before the Public Utilities Commission to request a waiver or permission to avoid penalties.

Therefore, HIE respectfully requests that provisions in S.B. 715, S.D. 1 that define large self-generators and establish renewable standards for large self-generators be deleted. Thank you for allowing me to present written testimony opposing this bill.

Xanne

| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | ktk@biodiesel.com |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Saturday, February 28, 2015 7:57:06 AM |

Submitted on: 2/28/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------|-----------------------------------|-----------------------|-----------------------|
| Kelly King | Pacific Biodiesel Technologies | Support | No |

Comments: Pacific Biodiesel supports setting a target of 100% renewable power by 2040. We need our legislators to establish a strong vision for Hawaii's energy independence and follow through with bold action!

Please note that testimony submitted <u>less than 24 hours prior to the hearing</u>, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | chuckcollins.mail@gmail.com |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Tuesday, March 03, 2015 9:51:02 AM |

Submitted on: 3/3/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|---------------|-----------------------|--------------------|-----------------------|
| Chuck Collins | Valley Consulting LLC | Comments Only | No |

Comments: Aloha, Thank you for your efforts to reduce Hawaii's dependency on imported fuels. We have the following comments to offer towards the proposed Senate Bill 715: 1. The proposed definition of 'large-self generator' is inconsistent with the Federal Regulatory Commission (FERC) definition of "large-generator". FERC defines large generator at 20 MW. 2. The 500 kW limit is also inconsistent with Hawaii's generator interconnection standard, set at 250 kW for so-called 'large generators'. 3. Hawaii's Energy Efficiency Performance Standard (EEPS) specifically names cogeneration/CHP as a strategy to help reduce statewide electricity consumption by 4,300 GW by 2030. The 500 kW limit will not help cogeneration/CHP projects move forward in Hawaii, and therefore the EEPS policy goal will be in jeopardy of not being fulfilled. 4. Our company is working specifically in Hawaii in support of President Obama's Executive Order promoting energy efficiency through cogeneration/CHP. We have committed resources to this effort, and are seeing positive results throughout Hawaii. Removal of the 500 kW 'large-generator' provision will help Hawaii achieve BOTH the Energy Efficiency Performance Standard, as well as the Renewable Portfolio Standard. It will keep intact the intent of the EEPS, and gives the RPS its own clear path toward practicality. Keeping energy efficiency as a guiding principal will ensure that our renewable resources are not squandered and used in an inefficient way. Mahalo, Chuck Collins, Principal Valley Consulting, LLC chuckcollins.mail@gmail.com Maui, Hawaii

Please note that testimony submitted <u>less than 24 hours prior to the hearing</u>, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.



March 4, 2015

To: Honorable Rosalyn Baker, Chair Honorable Brian Taniguchi, Vice Chair Senate Committee on Commerce and Consumer Protection

RE: SB 715 SD1 – Relating to Renewable Standards – Requesting Amendment to Exclude Self-Generators Conference Room 229; 10:00AM

Chair Baker, Vice Chair Taniguchi, and Members of the Committee:

My name is Eric Au and I am the Area Director of Engineering & Sustainability for Starwood Hawaii, which includes eleven resorts on four different Islands. Our resorts are Sheraton Waikiki, Royal Hawaiian, Westin Moana Surfrider, Sheraton Princess Kaiulani, Westin Maui, Sheraton Maui, Westin Kaanapali Ocean Resort, Sheraton Kauai, St. Regis Princeville, Westin Princeville Ocean Resort, and Sheraton Kona.

Starwood Hawaii supports a renewable energy future for Hawaii, however, we do not support this bill as written and are concerned with the unintended consequences this may have on self-generators. There are a number of self-generators operating in Hawaii today, or plan to do so soon. The self-generators produce electricity and waste heat onsite to drastically reduce energy consumption and improve system reliability. As such, we believe it is important for the Committee to be aware of the impact of the proposed changes to Section 269-91, and eliminate self-generators from this bill.

Several hotels, hospitals, schools and other facilities have either installed or plan to install gas-fueled onsite generation for optimal efficiencies. These facilities commonly install onsite generation that has the built in ability to capture the waste heat generated by producing electricity, which is then used to produce additional electricity, hot water or chilled water for air conditioning.

Requiring these facilities to meet the proposed Renewable Portfolio Standard (RPS) will reduce the economic benefit of these projects, slowing or even preventing implementation of high efficiency technologies, which would appear to be in conflict with achieving the State's energy efficiency goals of 30% by 2030. In addition, many of these self-generators are space constrained, especially in Waikiki, which means adding onsite renewable generation would be a major challenge.

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Such technologies are referred to as Combined Heat and Power (CHP) or cogeneration. CHP projects reduce the overall demand for electricity because the waste heat from producing electricity is captured and used to produce additional electricity, hot water or chilled water for air conditioning, which are commonly done using electricity. These installations operate at energy efficiency levels of 60% to 90% making them the most efficient way to convert fossil fuels into usable forms of energy. The benefit to the customer is a dramatic reduction in overall energy consumption.

CHP is also a technology endorsed by President Obama per his Executive Order titled, "Accelerating Investment in Industrial Energy Efficiency", which is encouraging efforts to achieve a national goal of deploying 40 gigawatts of new, cost effective industrial CHP in the United States by the end of 2020. The Department of Energy (DOE) also endorses the use of onsite generation and waste heat capture and actively participates in this area by funding the CHP Technical Assistance Partnerships, which operate in every state, including Hawaii, to facilitate the use of onsite generation. As shown on the DOE website:

"Combined heat and power (CHP)—sometimes referred to as cogeneration—provides a cost-effective, near-term opportunity to improve our nation's energy, environmental, and economic future. CHP is an efficient and clean approach to generating on-site electric power and useful thermal energy from a single fuel source. Instead of purchasing electricity from the grid and burning fuel in an on-site furnace or boiler to produce thermal energy, CHP provides both energy services to a facility in one energy-efficient step. Accelerated CHP has proven its effectiveness and holds promise for the future—as an:

- Environmental Solution Significantly reducing CO₂ emissions through greater energy efficiency;
- Competitive Business Solution Increasing efficiency, reducing business costs, and creating green-collar jobs;
- Local Energy Solution Deployable throughout the United States; and
- Infrastructure Modernization Solution Relieving grid congestion and improving energy security.

While a move to 100% RPS on electricity generation is a goal to be lauded, we must first understand the impact to self-generators.

We suggest amending this bill to exclude self-generators. This will allow private and public facilities to pursue those energy solutions that are proven to reduce costs, increase efficiency and improve reliability while still helping to achieve our State's energy goals.

Thank you.



TO THE SENATE COMMERCE AND CONSUMER PROTECTION COMMITTEE

THE TWENTY-EIGHTH LEGISLATURE REGULAR SESSION OF 2015

WEDNESDAY, MARCH 4, 2015 10:00 a.m. State Capitol, Conference Room 229

TO THE HONORABLE ROSALYN BAKER, CHAIR, THE HONORABLE BRIAN TANIGUCHI, VICE-CHAIR AND MEMBERS OF THE COMMITTEE

SENATE BILL NO. 715 - RELATING TO RENEWABLE STANDARDS

As Hawai'i's first Sustainable Business Corporation, the Hawaiian Electric Vehicle Network would like to submit **testimony in strong support of SB 623**, establishing a long-term vision for clean energy in Hawai'i. The State of Hawai'i has established energy goals reflected in its Renewable Portfolio Standards. Those goals, set forth by the legislature in 2009 with Act 155, include generating 40% of our power from renewable energy by 2030. However, we could face a scenario of producing 60% of our energy from <u>imported fossil fuels</u> in 2030 and indefinitely beyond which would not be in the best interest of Hawai'i's people, environment, or economy.

Since Act 155 expressly acknowledged that it provided only a "first step in aligning Hawai'i's energy policy laws with the State's energy goals." House Bill 623 is the "next step" and reflects the potential for energy leadership and vision by the legislature.

Electric Vehicles, Photovoltaics, Wind, Geothermal and importantly Energy Storage are all components of what the State should consider advancing in order for us to meet these very attainable goals. Your commitment through legislation to meeting and exceeding the Hawai'i Clean Energy Initiative goals can shine a worldwide spotlight on our State and people in conserving, replenishing and nourishing our 'aina and environment by utilizing the clean renewable energy that we are blessed to have here in Hawai'i. Let's use what we already have here available to us, and stop importing what <u>will send tens of billions of dollars outside of our State economy over the next 15 years.</u>

The 2040 goal is definitely achievable and would not only indicate Hawai'i's leadership in Clean Energy and Sustainability, but would diversify and keep financial resources in our State's economy, create thousands of jobs, dramatically improve our energy security and independence, and most importantly improve the quality of life for everyone in Hawai'i.

Thank for the opportunity to submit testimony on this legislation before your committee.

Respectfully, Michael Snyder Founder and President

| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | aaron.tod@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Friday, February 27, 2015 4:36:43 PM |

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------|--------------|-----------------------|-----------------------|
| Aaron Tod | Individual | Support | No |

Comments: Aaron Tod 253 Kaha St Kailua, Hawaii 96734 (808)-226-1457 Dear Legislator, I am a senior student at Le Jardin Academy. One of the main reasons that my family lives in Kailua is because we like to take advantage of the close proximity to the ocean. At Le Jardin Academy I participate in outrigger canoe paddling. Something I am concerned about is the effect that the use of fossil fuels is having on our environment. More specifically the increase in acidity of the ocean. I strongly support SB 715, HB 623, setting a long term target for energy independence in Hawaii. I support a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Please pass these bills, which will set Hawaii on path towards achieve 100% renewable power. Thank you, Aaron Tod

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | alexander.black@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Friday, February 27, 2015 4:52:18 PM |

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------|--------------|-----------------------|-----------------------|
| Alex Black | Individual | Support | No |

Comments: Dear legislator, I am a 11 grade student at Le Jardin academy. I strongly support SB 715 and HB 623, setting a long term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. The situation is dire, every year the burning of fossil fuels poisons our air, water and earth. It is essential that everyone takes a stance to make a difference. By passing the SB 715 and HB 623, Hawaii will do its part to save our world and fight against this global crisis that is Climate change. The community solar change will allow citizens to each play a part in sustainability regardless of where they live. The idea of Hawaii off fossil fuels by 2040 will make a tremendous difference. We can lead the way on shift to sustainable energy as an example for all to follow. So I ask you, as a student who strongly believes in sustainability, please pass these bills, which will will set Hawaii on a path towards achieving 100% renewable energy. Aloha, Alex Black

Please note that testimony submitted <u>less than 24 hours prior to the hearing</u>, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | alexandra.fairfax@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Friday, February 27, 2015 4:34:41 PM |

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Organization | Testifier Position | Present at Hearing |
|--------------|-----------------------|-----------------------|
| Individual | Support | No |
| | | Organization Position |

Comments: Dear Legislator, I am a tenth grade student at Le Jardin Academy. I strongly support SB 715, HB 623, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need a legislators to establish a strong vision for Hawaii's energy independence. Having renewable energy sources for Hawaii is very important to me because the non-renewable energy sources are contributing to climate change, which are killing our coral reefs. Surfing and snorkeling has always been a big part of my life here in Hawaii and I would hate to see the animals and coral dying off, so other people wouldn't be able to enjoy the beauty from them. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable energy power. Aloha, Alexandra Fairfax

Please note that testimony submitted <u>less than 24 hours prior to the hearing</u>, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.
| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | ariel.sax@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Monday, March 02, 2015 1:18:15 PM |

Submitted on: 3/2/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------|--------------|-----------------------|-----------------------|
| Ariel Sax | Individual | Support | No |

Comments: Ariel Sax 610 Kaimalino Place Kailua, Hawaii 96734 (662) 603-3484 Dear Legislator, My name is Ariel Sax and I am a senior attending Le Jardin Academy. I have recently moved to Hawaii and have fallen in love with this island. The beauty behind Hawaii is that everything is natural. I have developed a strong connection to the island and believe that saving our planet for future generations is important. I am afraid of coming back to the islands and it looking differently than when I was younger. By the time my kids are born, the island will be more polluted than ever. I worry that the leaders of Hawaii aren't making enough of an effort to protect our environment. I want to be able to tell my children that I contributed to saving the planet, one Bill at a time. I strongly support SB 715, HB 623, setting a long-term target for energy independence in Hawaii. By setting a target of 100% renewable power by at least 2040, we will not only be making a difference, but saving millions of lives by slowing down climate change. If not now, then when? The longer this is pushed out, the more lives are damaged, and the more this planet is weakened. Not only are fossil fuels expensive, but the burning of any fossil fuel releases CO2 into the atmosphere, contributing to global climate change. This is damage we can't necessarily see until it's too late. Don't you want to save the lives of your children, grandchildren, and great grandchildren? We are slowly destroying a planet that has provided a home to all of humankind and the least we can do is save it from being destroyed. I believe Hawaii should be leading an example for the rest of the nation by becoming proactive users of sustainable, clean and renewable energy. Please pass these bills because it will impact my future and it will impact your future, too. Aloha, Ariel Sax

Please note that testimony submitted <u>less than 24 hours prior to the hearing</u>, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

| From: | Asia Yeary |
|----------|--|
| To: | FINTestimony; CPN Testimony |
| Subject: | Support for HB 623 and SB 715 |
| Date: | Saturday, February 28, 2015 5:30:22 PM |

Dear Representatives and Senators,

I am an Oahu resident but I have traveled to Germany and learned about what they are doing regarding renewable energy. It is possible to have our energy come from renewable sources. If Germany can do it, we can do it.

I strongly support HB 623 and SB 715, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

Thank you.

Sincerely,

Asia Yeary

| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | benen.weir@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Friday, February 27, 2015 4:32:06 PM |

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------|--------------|-----------------------|-----------------------|
| benen | Individual | Support | No |

Comments: Dear Legislator, I strongly support SB 715 and HB 623, setting a long term target of 100% energy independence in Hawaii. I support renewable energy due to its extremely high price for the average consumer. An oil based energy industry is far more expensive for Americans in the long run, compared to renewable energy such as solar power. Not only are fossil fuels economically detrimental, they are also environmentally damaging. The burning of oil and coal releases greenhouse gasses such as CO2, which in turn heat up our oceans and atmosphere. A rise in global temperature creates acidified reefs, mass animal extinctions, and radical weather patterns that damage human civilization. These changes are not going to occur in the future, they are not going to be dealt with by future generations. These conditions are already happening in full swing. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power, and to combating the negative effects of fossil fuels. Thank you, Benen Weir

Please note that testimony submitted <u>less than 24 hours prior to the hearing</u>, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

| From: | Bobbie Becker |
|----------|-----------------------------------|
| To: | CPN Testimony |
| Subject: | In strong support of SB715 |
| Date: | Sunday, March 01, 2015 8:10:03 AM |

I am writing in support of more solar energy on Hawaii's energy grid. We have the opportunity to be a global showcase for energy efficiency. We should strive to be the number one most energy self-sufficient communities in the world since we have the sun, sea and geothermal resources to do so. Just think of all the positive ways that would affect our economy!

| From: | Carolynn Bell-Tuttle |
|----------|--|
| То: | CPN Testimony |
| Subject: | In strong support of SB715 |
| Date: | Saturday, February 28, 2015 7:10:15 AM |

I strongly support HB 623 and SB 715, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

Carolynn Bell-Tuttle Honolulu, HI

| From: | <u>Chai Blair-Stahn</u> |
|----------|--------------------------------------|
| To: | CPN Testimony |
| Subject: | In strong support of SB715 |
| Date: | Friday, February 27, 2015 8:08:07 PM |

To the Senate Commerce and Consumer Protection Committee:

I strongly support SB 715 to set a long-term target for energy independence in Hawai'i. We have the opportunity to be global leaders of sustainable and renewable energy. The time to act is now. What kind of world do we want to leave to our children and their children? With the imminence of climate change, the only right choice is to strive for 100% renewable power by 2040.

Currently, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. This is not good enough.

Again, I urge you to be a part of positive environmental change and pass SB 715 to set Hawaii on a path towards achieving 100% renewable power.

Sincerely, Chai Blair-Stahn Environmental Educator Hawai'i Nature Center

| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | cielle.watjenbrown@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Friday, February 27, 2015 4:31:53 PM |

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|---------------------|--------------|-----------------------|-----------------------|
| Cielle Watjen Brown | Individual | Support | No |

Comments: Dear Legislator, I am a senior at Le Jardin Academy. I strongly support SB 715, and HB 623, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040 because if we continue to rely on fossil fuels for energy, we are putting ourselves and the natural world in danger. It is expensive and unsafe for the environment because of oil spills, which kill animals and destroy aquatic ecosystems. I live in Kailua, and I enjoy being in nature more than anything else. My parents are both in strong support of using renewable resource alternatives, and we have solar panels on our house. However, I know that this is not enough. Everyone should have access to solar panels, at the very least. When I am an adult, I want my kids to be able to go snorkeling and see diverse fish and healthy reefs. Sincerely, Cielle Watjen Brown

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| From: | Darren Kimura |
|----------|--|
| To: | FINTestimony; CPN Testimony |
| Subject: | HB623 and SB715 |
| Date: | Saturday, February 28, 2015 4:23:03 AM |

Dear Members of the House and Senate Committees,

I strongly support HB 623 and SB 715, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

Mahalo, Darren

Darren T. Kimura, CEM Managing Member Enerdigm Capital Management, LLC

www.enerdigm.com

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| From: | <u>kama"aina</u> |
|----------|-----------------------------------|
| То: | CPN Testimony |
| Subject: | In strong support of SB715 |
| Date: | Monday, March 02, 2015 6:44:07 AM |

I strongly support HB 623 and SB 715, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

Sincerely,

Don Najita

| From: | Gary Harrold |
|----------|--|
| To: | CPN Testimony |
| Subject: | In strong support of SB715 |
| Date: | Saturday, February 28, 2015 3:01:14 AM |

We, due to the contaminating nature of vehicles, do not drive a vehicle. As a 70 year old man I am on my 9 month of only cycling! Hawaii must become fossil fuel free by 2040. Hawaii must end the energy intensive endeavor of importing oil. Just getting the oil here on ships is quite polluting. Fund solar and wind energy collection. Thank you, Gary Harrold 11 Ala Muku St. Hilo HI 96720

| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | georgecattermole@earthlink.net |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Saturday, February 28, 2015 4:23:15 AM |

Submitted on: 2/28/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|-------------------|--------------|-----------------------|-----------------------|
| George Cattermole | Individual | Support | No |

Comments: I urge you to pass SB715. If accurate and meaningful cost/benefit analyses are to be made regarding the choices involving bringing more renewables to Hawaii it is imperative that these be made with the overall goal of reaching 100% renewables. We now know that carbon based fuels are accelerating climate chaos and we have known for a long time that they are finite. Hawaii can become to renewable energy development what Silicon Valley has been for digital technology development. Begin to build for a 100% renewables future and 'They Will Come'. Thanks for your attention to this crucially important matter. Dr. George Cattermole

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| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | haley.coffman@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Monday, March 02, 2015 4:45:43 PM |

Submitted on: 3/2/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|---------------|--------------|---------------------------|-----------------------|
| Haley Coffman | Individual | Comments Only | No |

Comments: Haley Coffman 1131 B Manulani St. Kailua, Hawaii 96734 (808)237-0591 Dear Legislator, I am an 11th grade student at Le Jardin Academy. I strongly support Bill SB 715, setting a long-term goal for renewable energy independence in Hawaii. I believe that having 100% renewable energy for Hawaii by 2040 is very possible. In class we learned about the human impacts on our planet, and the harmful effects of burning fossil fuels on our planet. We need to change. Switching to solar energy is the responsible choice, and we can rely solely on local and sustainable energy; solar energy is the right choice for Hawaii. Please pass these bills, and help Hawaii reach its goals of sustainable energy. Aloha, Haley

Please note that testimony submitted <u>less than 24 hours prior to the hearing</u>, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

| From: | <u>Chang, Henry</u> |
|----------|---|
| То: | CPN Testimony |
| Subject: | In strong support of SB715 |
| Date: | Saturday, February 28, 2015 10:49:04 AM |

I strongly support HB 623 and SB 715, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

Henry Chang AIA | Technical Design Manager | Project Management & Construction | Lend Lease

2104 Ulrich Way, Schofield Barracks, HI 96857 T 808 748 8235 | F 808 748 8299 | M 808 284 3901 henry.chang@lendlease.com | www.lendlease.com

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Feb. 27, 2015

Dear Senate CPN committee,

I support SB715 HD1 to raise our Renewable Portfolio Standards (RPS) to 70% by 2035 and 100% by 2040. Setting these higher goals will force Hawaii to move quickly away from imported fossil fuels, a major factor in climate change.

Moving to renewables will relieve Hawaii residents, businesses and government agencies of the exorbitantly high energy costs we pay compared to all other states. Also, new jobs may result from using local energy sources (sun, wind, wave, geothermal).

Substituting "bridge" fuels such as liquid natural gas does NOT move us in the direction of renewable energy. If we can skip this step altogether, we eliminate the costs of a transition step and all the "baggage" it would bring. Go straight to renewables.

Finally, require the public utilities commission (PUC) to report on the cost-effectiveness of these renewable portfolio standards so that our progress as a state can be gauged.

Please vote YES on SB715 HD1.

Thank you,

Jan Pappas 98-1287 Akaaka St. Aiea, HI 96701 jpappas60@gmail.com

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|-----------------------|--------------|-----------------------|-----------------------|
| Javier Mendez-Alvarez | Individual | Support | No |

Comments:

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| From: | <u>Jeff Yin</u> |
|----------|------------------------------------|
| To: | CPN Testimony |
| Subject: | I support SB 715 |
| Date: | Monday, March 02, 2015 11:08:01 PM |

I strongly support SB 715 and HB 623, setting a long-term target for energy independence in Hawai'i. I support setting a target of 100% renewable power by 2040. We need our legislators to establish a strong vision for Hawai'i's energy independence, which in turn sets a strong example for the rest of the United States and the world. Hawai'i is uniquely positioned, with our high energy prices and political will for clean energy, to be the first state in the nation to reach 100% renewable power. By setting this example, we can have a much larger impact on our planet's future than just reducing our islands' carbon footprint.

Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

Mahalo, Jeff Yin, PhD Makiki, O'ahu, Hawai'i

| From: | Joan Larcom |
|----------|------------------------------------|
| To: | CPN Testimony |
| Subject: | In strong support of SB715 |
| Date: | Sunday, March 01, 2015 11:59:38 AM |

please, let's support this bill and got for 100% renewable energy by 2040. The time is NOW>

Joan Larcom

| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | truly.joannies@gmail.com |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Friday, February 27, 2015 8:03:49 PM |

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------|--------------|-----------------------|-----------------------|
| Joan Pan | Individual | Support | No |

Comments: I strongly support HB 623 and SB 715, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

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| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | joseph.braun@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Friday, February 27, 2015 4:34:41 PM |

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------|--------------|-----------------------|-----------------------|
| Joey Braun | Individual | Support | No |

Comments: Joey Braun 212 Ku'umele PI. Kailua Hawaii 96734 (808) 782-5465 Dear Legislator, I am a senior at Le Jardin Academy and I strongly support SB715 and HB 623. I support setting a target of 100% renewable power by at least 2040. Each year, I spend the entirety of my summer camping and backpacking all over Montana. As the years pass and I continue to return, I see the glaciers as they shrink and begin to disappear. Although this is Montana and not Hawaii, the impact of our fossil fuel use is the same. Along with these excursions to Montana, I participate with the same program in Hawaii, taking young children into nature to create connections with each other and with our earth. The joy that I see in each of the kids eyes as they adventure through the woods brings an indescribable feeling me and thinking that someday that will not be possible anymore brings and indescribable sadness. Renewable energy is the only way we can save our planet and keep our environment from being changed forever. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power. Thank you, Joey Braun

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| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | joseph.cassidy@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Monday, March 02, 2015 7:40:43 PM |

Submitted on: 3/2/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|----------------|--------------|-----------------------|-----------------------|
| Joseph Cassidy | Individual | Support | No |

Comments: Dear Legislature, I am an eleventh grader attending Le Jardin Academy and I strongly support SB 175, and HB 623, setting a long-term target for energy independence in Hawaii. My family and I have always been advocates for alternative sources of energy, explicitly solar. For my tenth grade project, I designed and created a working solar panel because I was extremely interested in the subject. In order to successfully build my panel, I had to do the necessary research to thoroughly understand my topic. The current state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. Simply speaking, this is not good enough. I completely understand that a 100% renewable energy generation will hurt people's jobs and families but we are looking at the future of our world here, not just one generation. Please pass these bills, which will set Hawaii on the path towards achieving 100% renewable power. Aloha, Joseph Cassidy

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| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| То: | CPN Testimony |
| Cc: | kanehoalani.kawelo@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Monday, March 02, 2015 7:10:26 PM |

Submitted on: 3/2/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------------|--------------|-----------------------|-----------------------|
| Kanehoalani Kawelo | Individual | Support | No |

Comments: Dear Legislator, I am an eighth-grader at Lejardin Academy. I strongly support SB715 and HB613 because I wanted to be good for the future generations. I also think if we keep using oil here it won't last as long. Also oil spills affect animals in the ocean and I like to go fishing and explore in the ocean. I want to future generations to have the same experiences that I do. Solar car also uses the sun power while we have it. I strongly support the bill.

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| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | kennedy.marx@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Friday, February 27, 2015 4:49:23 PM |

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|-------------------|--------------|-----------------------|-----------------------|
| Kennedy-Anne Marx | Individual | Support | No |

Comments: Kennedy-Anne Marx Kailua Hawaii 96734 (808)321-6888 Dear Legislator, I am an 8th grade student at Le Jardin Academy, I strongly support SB 715, HB 623, setting a long term plan for energy independence, and not relying on fossil fuels in Hawaii. We need the legislator to have a correct vision for Hawaii's future with energy independence. I was born and raised in Hawaii and I want to be able to live in Oahu in the future. I think that using solar would be very important and would slow down climate change. Glaciers are melting, PH levels in the ocean is changing, there are multiple problems caused by climate change, if we only rely on fossil fuels climate change will increase. This matters to me because I love Hawaii and I care about the planet, also recently over the summer I have been traveling to Montana with a hiking group, the Wild Kids, and in Montana we traveled to Glacier National Park. Glacier is really beautiful, but recently because of climate change the glaciers are melting. This is personal to me because many people can't visit this beautiful place because of the change in climate. If Hawaii has a renewable energy path and system we could slow down climate change, and eventually become independent of Fossil fuels. Please support and pass these bills, which will set Hawaii in the right direction in achieving 100% renewable power. Mahalo~Kennedyanne Marx

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| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | kiana.lo@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Friday, February 27, 2015 5:05:08 PM |

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------|--------------|-----------------------|-----------------------|
| Kiki Lo | Individual | Support | No |

Comments: Kiki Lo P.O. Box 4320 Kaneohe, HI 96744 (808) 208-5482 Dear Legislator, I passionately support SB 715 and HB 623, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. I am a 10th grade student at Le Jardin Academy. I have a club at our school called Green Team and the objective of the club is to get the school as "green," energy-efficient and sustainable as possible. The detrimental environmental impacts from using non-renewable energy resources are affecting more than just Hawaii. By becoming 100% solar means that we don't have to import fossil fuels, losing money for the oil and gas companies, but saving money for the people. When we ship oil we are harming the ocean by killing the marine life. Without the marine life that's damaging our economy because we have a lot of fisherman (my Uncle, Reno Henriques owner of Fresh Catch included) that would be put out of business if there's no fish to make poke. Fossil fuels are "fossil" they're not renewable and one day we're going to run out of them. By becoming 100% solar we would be planning for the future. Therefore, not only myself but you should also want to have a passionate urge for Hawaii to become as sustainable as possible and being 100% solar within the next 25 years. Not only would we be saving the people of Hawaii a lot of money, but we would be preventing the suffering of our marine life and making a giant step towards a sustainable world.

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| Laura Christensen |
|-----------------------------------|
| CPN Testimony |
| In strong support of SB715 |
| Monday, March 02, 2015 7:24:12 AM |
| |

I strongly support SB715. Eliminating our dependence upon fossil fuels will not only create a healthier and cleaner environment for our aina but also, for the planet. Mahalo, Laura Christensen

| From: | Lucy Marcus |
|----------|--|
| To: | CPN Testimony |
| Subject: | In strong support of SB715 |
| Date: | Saturday, February 28, 2015 1:10:42 PM |

I strongly support HB 623 and SB 715, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

Sincerely, Lucy Marcus

Lucy Marcus MS

(808)319-7159 <u>lucymarcus@gmail.com</u> <u>http://www.worldenvironmentalfilms.com</u>

| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| То: | CPN Testimony |
| Cc: | madison.mcclendon@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Friday, February 27, 2015 11:19:27 PM |

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|-----------------|--------------|---------------------------|-----------------------|
| Maddy McClendon | Individual | Comments Only | No |

Comments: Dear Legislator, I am an 11th grade student at Le Jardin Academy. I strongly support SB 715, HB 623, setting a long-term target for energy independence in Hawaii. I support this because in 30 years, I want to be able to say that I made a difference in helping the earth and stopping climate change. I don't want my children, and other future generations, to live on a dying planet. I grew up playing outside in nature and enjoying what earth has to offer. I don't want its natural resources to be gone within my lifetime. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Please pass these bills, which will help Hawaii start on a path that leads towards achieving 100% renewable power. Thank you, Maddy McClendon

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| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | malae.wilcox@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Friday, February 27, 2015 4:36:15 PM |

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------|--------------|-----------------------|-----------------------|
| Malae Wilcox | Individual | Support | No |

Comments: Mala'e Wilcox 239 Maluniu ave. Kailua Hawaii 96734 (808) 224-8274 Dear Legislator, I am a senior at Le Jardin Academy on the east side of O'ahu. I strongly support SB 715, HB 623 and setting a long-term target for energy independency in Hawaii. Because I am part of a generation a future world leaders, it is our responsibility to set the standard for alternative energy use. Being born and raised in Hawaii has been a privilege for me. I am an avid water man and enjoy hiking through O'ahu's striking mountains. These passions have allowed me to experience some of the most beautiful aspects that our wonderful state has to offer. My children, grandchildren, and great grandchildren deserve to experiences the wonders that I have been lucky enough to see. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power. Aloha, Mala'e Wilcox

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| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | malia.vanhorn@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Friday, February 27, 2015 4:45:24 PM |

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|----------------|--------------|--------------------|-----------------------|
| Malia Van Horn | Individual | Comments Only | No |

Comments: Malia Van Horn 991 iopono loop Kailua Hawaii 96734 (808) 673-8888 Dear Legislator, I am an 8th grade student at Le Jardin Academy, I am a strong supporter of SB 715 and HB 623. My family and I are strong supporters of solar panels because I care about my kids future and their kids and so on, I want to do something before it's too late, I don't want my kids to have to deal with it when theres even more to deal with and maybe even too late. In 30 years if the world depends on fossil fuels and global warming is worse than ever I don't want to be the one that says " I did nothing to help" I wanna know (even if no one else does) that I did the best I could to make a change and to do something. Hawaii has a good future ahead (as do all of us) but not with fossil fuels, if i'm being completely honest I see no reason why we use fossil fuels and if we keep using fossil fuels we will only go down hill. Please pass these bills, to get Hawaii back on the right track. Aloha, Malia

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| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | marika.marx@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Friday, February 27, 2015 4:48:46 PM |

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------|--------------|--------------------|-----------------------|
| Marika Marx | Individual | Comments Only | No |

Comments: Dear Legislator, I strongly support SB 715, and HB 623, I believe in setting a long-term target for energy independence in Hawaii. I am an 11th grade student at Le Jardin Academy. We should take the lead in the strive for sustainable energy. The Earth should be here for all of to enjoy, and we should take priority in saving our home instead of making a profit. I strongly support this bill because I believe in a bright future for Hawaii's keiki. I am a part of Wild Kids an out doors program for students at Le Jardin for grades kindergarten through 8th grade. We teach the kids about how to take care of the Earth and do no harm to the planet. Show these kids that the government does care about the environment and saving the Earth just as much as they do. I also participate in ocean sports like paddling for Le Jardin. We placed 4th over all in girls varsity 1 for Oahu's ILH, I would like to keep the ocean clean for future generations and so they can carry on the legacy. But with out this bill passing we will not change our ways and continue the burning of fossil fuels and adding carbon into our atmosphere. By the increase in the carbon levels in the atmosphere, the ocean, which is the largest carbon sink on the Earth, will start to acidify because of the high levels of carbon. When the ocean acidifies we kill our coral reefs and marine life that Hawaii is so well known for. Please pass SB 715 and HB 623!! Preserve and protect the Aina!!

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

Dear Senators:

I strongly support HB 623 and SB 715, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

Mahalo for your consideration.

Sincerely, Mark A. Nokes, PhD 3805 Kana'ina Avenue Honolulu 96815

| From: | <u>marsha johnson</u> | |
|----------|------------------------------------|--|
| To: | CPN Testimony | |
| Subject: | In+strong+support+of+SB715 | |
| Date: | Sunday, March 01, 2015 11:16:39 AM | |

I strongly support SB 715 and HB 623, setting a long term target for energy independence in Hawaii. I support setting a target of 100% renewable power by 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still be from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see- energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable energy.

| From: | mailinglist@capitol.hawaii.gov |
|--------------|--|
| To: | CPN Testimony |
| Cc: | maya.martinez@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Monday, March 02, 2015 4:27:02 PM |
| Attachments: | testimony.pages |

Submitted on: 3/2/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|---------------|--------------|-----------------------|-----------------------|
| Maya Martinez | Individual | Support | No |

Comments: Maya Martinez 546 Ka Awakea Road Kailua Hawaii 96734 (808) 263 0594 Dear Legislator, I am an 8th grade student at Le Jardin Academy. I support SB 715 and HB 623 because I believe it is important to stop using fossil fuels. I also believe in having 100% renewable power by 2040. I strongly believe in this because at the rate we are going, our planet is not going to be around for much longer. It will not be in my generation and it might not be in my kids generation, but if we do not try to change our ways, its will happen soon enough. If I do not try to do something now, and later bring a kid into the world, a dying world, then I am going to regret not trying to make a difference. I could not stand to live in a place that I know is slowly dying because I did not do anything. If I want my kids to have a great future, and their kids to have a great future, then I think that we need to do something about this now. Please pass these bills, it could give our earth a little more time. Aloha, Maya Martinez

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Mia Zarella

45995 Wailele road #60

Kaneohe Hawaii 96744

(808) 247-3848

Dear Legislator,

I am an eighth grade student at Le Jardin Academy. I strongly support SB 7115 and HB 623 in making Hawaii have 100% renewable energy by at least 2040. I support this because each year my mother struggles to pay tuition for the three different private schools she has my sister, brother and I go to. Along with driving to three different schools all around the island twice a week my mother also has to drive out to Kapolei so my brother and I can play inline hockey. When my mother does all of this just to make my siblings and I happy then she has to pay almost \$4 per gallon of gas it makes me feel horrible. fossil fuels are expensive and damaging to the environment. 40% by 2030 is not near good enough. there is too much damage to the planet as there is, we don't want to add more.

Please pass these bills to have Hawaii on a path to 100% renewable energy.

Thank you,

Mia Zarella

| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | michael.gabrelcik@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Friday, February 27, 2015 4:39:26 PM |

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|-------------------|--------------|-----------------------|-----------------------|
| Michael Gabrelcik | Individual | Support | No |

Comments: Dear Legislator, I am currently a senior at Le Jardin Academy in Kailua. I strongly support SB 715, and HB 623, setting a long-term target for energy independence in Hawaii. Hawaii is one of the sunniest places in the world and we, as people, have the opportunity to change how this state operates. We need our legislators to establish a strong vision for Hawaii's energy independence. Renewable energy does not only help our planet, but renewable energy will keep money in the pockets of the people that need it most. I know people all around the island that do not have enough money to eat sometimes and have to go hungry because they have to pay for the power bill each month. Renewable energy can be the answer to these problems. There is so much potential for renewable energy in our islands and we, as citizens, should be able to use that potential to improve our islands. Renewable energy will obviously affect the planet greatly but people do not know how. If were to continue to use oil as our main source of energy, there a possibilities of oil spills which can kill many fish and coral and disrupt many ecosystems in our oceans which will eventually affect both the land animals of the islands and also us. If the fish die, businesses that such as restaurants will lose profit and that will eventually affect our economy and possibly increase the homeless population because there are less jobs. In conclusion, I strongly support SB 715, and HB 623 because I believe renewable energy will improve our islands greatly. This is a major decison for the state and I hope they make the right one. I realize me being makes this message not as important, but I have a voice and it wants to be heard. Aloha, Michael Gabrelcik

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| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | mmmahalo2000@aol.com |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Sunday, March 01, 2015 1:58:20 PM |

Submitted on: 3/1/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------|--------------|-----------------------|-----------------------|
| Mike Moran | Individual | Support | No |

Comments: Please support. Thanks Mike Moran Maui

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| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | nathan.magee@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Friday, February 27, 2015 4:36:03 PM |

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------|--------------|-----------------------|-----------------------|
| Nathan Magee | Individual | Support | No |

Comments: Dear, Legislator I strongly support SB 715, and HB 623, setting a longterm target for the energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. I am in the 8th grade at LJA in Kaneohe. Over my years at school I have learned a lot from my teachers about global warming and it's affects on our environment. Being a kid living in Hawaii I always go to the beach. Learning about global warning I learned about how the oceans reefs are being affected. I know that if we do not change our ways of creating energy in Hawaii, then our reefs will continue to be killed and eventually die completely. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power, and save Hawaii's reefs. Mahalo, Nathan Magee

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| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | owen.pyle@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Friday, February 27, 2015 4:59:33 PM |

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------|--------------|---------------------------|-----------------------|
| Owen Pyle | Individual | Comments Only | No |

Comments: Dear Legislator, I am an eighth grade student at Le Jardin Academy. I strongly support SB 715 and HB 623, the bills that will achieve an independent energy future. My dad is a marine biologist, and often dives around the deeper waters of Hawaii, discovering and studying the ecosystem's fishes. We need to have a 100% energy independent solution for Hawaii by 2040. The 7 billion dollars importing petroleum to Hawaii can be spent on other matters of state importance while renewable energy powers the Islands. Hawaii's economy is based on us being know as a chain of beautiful islands with amazing tropical wildlife and scenery. Let us maintain that beauty, by saving our reefs and beaches. Let Hawaii be the leading renewable energy state in the nation... in the world. In order for this to happen, we need our legislators to make the right choice for Hawaii and approve energy independence. Currently, state law requires Hawaii to have a 40% renewable energy system by 2040, but that just wont cut it! 60% of generated energy could still be created by the combustion of fossil fuels. We need a more stable, reliable and renewable solution for Hawaii. Please be the ones to pass these bills. Be the leaders that will be remembered as the saviors of Hawaii's energy crisis. Mahalo, Owen Pyle

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| From: | Roy Skaggs |
|----------|--|
| To: | CPN Testimony |
| Subject: | SB 715 |
| Date: | Saturday, February 28, 2015 5:33:17 PM |

Aloha,

I strongly support HB 623 and SB 715, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

Sincerely, Roy Skaggs

| From: | Samuel K Kapoi |
|----------|--------------------------------------|
| То: | FINTestimony; CPN Testimony |
| Subject: | In strong support of HB623 AND SB715 |
| Date: | Friday, February 27, 2015 9:15:08 PM |

Aloha!

I strongly support HB 623 and SB 715, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

Me Ke Aloha 'Aina, Sam "Kamu" Kapoi

Stay connected: www.SamKapoi.com

| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | samuel.braun@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Friday, February 27, 2015 4:31:11 PM |

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------|--------------|-----------------------|-----------------------|
| Samuel Braun | Individual | Support | No |

Comments: Samuel Braun 212 Kuumele pl. Kailua, HI 96734 (808) 782-5046 Dear Legislature, I am an 11th grade student at Le Jardin Academy. I support SB 715 and HB 623 because I believe that saving our planet for future generations is important. I believe that Hawaii should be the national leader in sustainable energy. I believe that the earth should be here for humans to enjoy as we always have and should never be destroyed for the sake of money and profits. I think it is important that we are 100% reliable on renewable sources so that we can begin to repair that damage that fossil fuels has done already. I feel strongly about this because i do a lot of activities in the ocean. I enjoy surfing, swimming, and spearfishing along with my entire family. If CO2 levels continue to rise the ocean will become even more saturated with CO2 causing many problems including the extinction of many species that we hunt and the destruction of the reefs that make our surf breaks so legendary. Please pass these bills so that the worst case scenario doesn't become a reality. Aloha, Samuel Braun

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| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | serena.nozawa@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Monday, March 02, 2015 1:35:00 PM |

Submitted on: 3/2/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|---------------|--------------|-----------------------|-----------------------|
| Serena Nozawa | Individual | Support | No |

Comments: Serena Nozawa PO Box 26 Ka'a'awa, Hawaii 96730 (808)358-2161 Dear Legislature, I am a senior at Le Jardin Academy. I strongly support SB 715, HB 623, and setting long term target for energy independence in Hawaii. I believe that Hawaii could achieve and maintain 100% renewable energy by at least 2040. With the help of our legislature, Hawaii could establish a strong energy independence. Being an Oahu native, nothing saddens me more than the thought of my kids not having the same outdoor opportunities as myself, such as hiking and swimming at beautiful clear waterfalls. On a school trip to the John A. Burns School of Medicine, we talked to the Head of Anatomy. He had studied at UC Santa Barbara and when he came to Hawaii he was puzzled by lungs that had been donated. He asked a coworker and his coworker explained, "Steve, these are healthy lungs. You've never seen healthy lungs in South California." This hit me hard. I don't want my children to grow up in a Hawaii full of smog and polluted air. By changing to renewable energy, we can reduce pollutants and CO2 emissions, keeping our air clean for future generations. Aloha, Serena Nozawa

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Submitted on: 3/1/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|---------------|--------------|-----------------------|-----------------------|
| Susan Douglas | Individual | Support | No |

Comments:

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| From: | mailinglist@capitol.hawaii.gov |
|----------|--|
| To: | CPN Testimony |
| Cc: | taylor.souza@lejardinacademy.org |
| Subject: | Submitted testimony for SB715 on Mar 4, 2015 10:00AM |
| Date: | Friday, February 27, 2015 4:32:35 PM |

Submitted on: 2/27/2015 Testimony for CPN on Mar 4, 2015 10:00AM in Conference Room 229

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------|--------------|-----------------------|-----------------------|
| Taylor Souza | Individual | Support | No |

Comments: Dear Legislator, My name is Taylor Souza and I am a 11th grade student at Le Jardin Academy. I support renewable energy because I believe that saving our planet for future generations is extremely important. I strongly support SB 715, HB 623, setting a long term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Growing up in Kaneohe, and being raised by the bay, my family loves the ocean. Every weekend my papa and I enjoy free diving and fishing. It's one of the ways we bond and I am so close to him because the ocean has brought us together. CO2 emissions from our use of nonrenewable resources cause coral bleaching and the disruption of habitats for the fish and sea creatures that we take for granted every day. I hope that one day, I can take my grandkids out on the bay and teach them how to fish and dive and enjoy all of the beautiful ocean life that we take for granted every day. I am extremely worried about the future of our oceans and know that if we reduce our CO2 emissions by using renewable energy, the ocean and its life will sustain us for much longer. I hope that by the time I have kids and grandkids there will be solar on every roof in my neighborhood and my grandkids will not even know a day where there was such a thing as being reliant on nonrenewable resources. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power. Aloha, Taylor Souza

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TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support HB 623, SB 715, and HB 1512, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.Lets make HAWAII a leading example.

Sincerely, Annie Cusick

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

It's time to legislate for the future or our Island homes and businesses. HB 623, SB 715 and HB 1512 will go a long way to making renewable, sustainable clean energy a reality for all of us. Please do your part as an elected leader to pass these bills and bring responsible energy production to life.

Sincerely, Anthony Smith

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

My family and I very strongly support HB 623, SB 715, and HB 1512, setting a longterm target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set us on a pono path to a healthy future!

MAHALO Calley O'Neill

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support SB 715, HB 623, and HB 1512, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

Sincerely, Charles Lee

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support SB I strongly support HB 623 and SB 715, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power. This is very important to the Lowry family in Kaneohe, which has been steadily investing in residential on-site renewable power since 2008.

Sincerely, Cynthia Lowry

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support and urge passing of SB 715, HB 623, and HB 1512 aimed at setting the long-term target for energy independence in Hawaii. My wife and I are close to achieving energy independence and know well what that has done to improve our personal finances. Think what reliable carbon-free energy would do for the whole state economy. Set a target of 100% renewable power by 2040. We can do it and we can show the world that it is the right thing to do.

Sincerely, Duane Preble

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support House Bill 623, Senate Bill 715, and House Bill 1512, setting the long term target for energy independence in Hawaii. I believe we are the only state in the nation than can and should push for 100 % renewable energy and be self - sufficient and no longer be dependent on fossil fuels by the year 2040. Together we can.

I respectfully ask that you support these two bills for the betterment for the future of Hawaii and the world

Much Mahalo for allowing me to share my thoughts and ask for your support

Diane Kanealii

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I am writing this in support of promoting renewable energy in our State. We are a family that strives to create a clean, sustainable environment and hope to become energy independent in the near future. We support the Community Solar House Bill 484 and the Update of our Renewable Portfolio Standards to 70 % By 2035 and 100% by 2040. As the parent of 2 teenagers, I am deeply concerned with both the nature of power supply and environmental impact of energy resources on our planet. As a family, we drive EV and are in the process of obtaining approval for PV for our home. We are among the fortunate homeowners that have a rooftop with room for solar panels. However, residents that don't have that privilege should still be able to access the suns magnificent power. Our state is unique it its ability to offer the resource of energy that causes no known harm to body or environment. Let us take action to make it available to everyone.

Sincerely,

Elizabeth Kawananakoa

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I wholeheartedly support HB 623 and SB 715. We need 100 % renewable energy here in Hawaii by 2040. Please pass these bills to help Hawaii become more independent in energy use and less dependent on imported fossil fuel.

Sincerely, Folly Murdock

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support HB 623 and SB 715, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

Sincerely, Forest Frizzell

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support HB 623, SB 715, and HB 1512, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

Sincerely, Heather Huitt

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support SB 715, HB 623, and HB 1512, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

Sincerely, Henry Chang

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support HB 623, SB 715, and HB 1512, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

Sincerely, James Moonier

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Sincerely, Jamie Satterfield

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support SB 715, HB623, and HB1512, setting a long-term target for energy independence in Hawai'i.

Sincerely, Javier Mendez

TESTIMONY IN SUPPORT OF SB 715 SD1

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Sincerely, John Maurer

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

Please pass HB 623, SB 715, and HB 1512 to enable Hawaii to be energy independent using 100% renewable power. Hawaii can be a leader in many fields and certainly energy should be one of them. Let's do something together that will truly benefit generations to come in these beautiful islands.

Mahalo. Judy Mick, Kailua

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support HB 623, SB 715, and HB 1512, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power. We must act now to prevent the worst effects of climate change.

Sincerely, Katharine Beutner

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

As a lifelong Hawaii resident and a PV system owner, I strongly support SB 715, HB 623, and HB 1512, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. Hawaii is blessed with year-long sunshine as well as other renewable and local sources of energy. It only makes sense to use these resources as wisely as possible to wean us from dependence on offshore oil and natural gas and take measures that preserve the cleanliness and beauty of our aina. We must do all we can to achieve 100% renewable power. We must seize the power to utilize our own sustainable energy from those who primarily want to profit from power sources out of our control. Thanks for listening.

Sincerely, Kathleen Sato

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I support SB 715. The time for us to act on climate change was about 40 years ago. I learned about it in my U.H. biology class. Why has it taken so long to do something to stop it and save ourselves? In one word; GREED!I have grandchildren and I happen to think that they are more important than making rich people richer. Please support HB 623!

Sincerely, Laura Gray R.N.

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

Renewable energy is a no-brainer for Hawaii. With our abundant sunshine, geothermal sources, and wind, we should be the national leader in renewable energy. I strongly support HB 623 and SB 715, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by 2040. We need our legislators to establish a strong vision for Hawaii's energy independence.

Sincerely, Laurence Rotkin

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

Please support this Bill until it becomes law. Renewable energy stimulates our local economy, and allows us to play a part in slowing climate change. HECO (65%) and DBEDT (70%) are on board with similar increases by 2030, so this is not a stretch. It is important to add in the later goal of 100% renewable so that no utility company considers us a permanent captive market for imported fossil fuel. Your leadership on this Bill will allow Hawaii to be leaders in renewable energy, with the expertise our businesses develop being a fabulous new export for our State.

Thank you, Lisa Marten

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support HB 623, calling for 100% clean energy by 2040. We need legislators with a strong vision for Hawaii energy independence. Right now, state law targets 40% by 2030 but that's not good enough because technologies are already in place to exceed this target easily. Please pass these bills that will set Hawaii on a path toward 100% clean energy that is local, sustainable, and cost-effective.

Lois Crozer Kailua

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I STRONGLY support HB 623, SB 715, and HB 1512, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Seriously. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power and ultimately lead to preserving our fragile environment. This is so, so important.

Sincerely, Lucas Cusick

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

Please support HB623, HB1512, and SB 715, to establish a strong vision for Hawaii's energy independence.

We need to set a target that matches the outcome we WANT to see -- energy that is local, secure, and sustainable.

I hope you will pass these bills which will set Hawaii on a path towards achieving 100% renewable power.

Mahalo for your consideration. Marjorie Erway

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support SB 715, HB 623, and HB 1512, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power

Sincerely, Matt Johnson

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support SB 715, HB 623, and HB 1512, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030.

Hawaii can lead the way and we need to. Our unique geographical situation demands it.

Sincerely, Matthew Rail

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

Now that Hawaii is ahead of the game in its energy independence target, the state can do even more. I support SB715 and HB623, each of which sets a target of 100% renewable power by at least 2040.

Anything that can be done to speed up the goal of obtaining energy that is 100% local, secure, and sustainable is worth doing.

Sincerely, Nancy Davlantes

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support SB 715, HB 623, and HB 1512, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

Sincerely, Nandini Bhattacharjee

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support SB 715, HB 623, and HB 1512, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

We have had enough of local utility's dragging us behind there agenda. This is good for every tax payer.

Mahalo for your time Paul Hicks

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support SB 715, HB 623, and HB 1512, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. It is completely doable. Don't give HECO or NextEra control to deter progress. Hawaii is already so expensive to live in. Please take care of the residents of Hawaii by reducing some of their expenses. Renewable energy needs to be a top priority and we need to pick up the pace to meet 100% renewables. I know it can be done before 2040.

please support the Senate and House bills: SB 715, HB 623, and HB 1512.

Sincerely, Sandra Harvey

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support this legislation, including the target date of 2040.please do what's right for this state.

Seny Bynum Honokaa

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support SB 715, HB 623, and HB 1512, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040. We need our legislators to establish a strong vision for Hawaii's energy independence. Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

Sincerely, Spencer Toyama

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

My name is Steve Holmes and I am the Sierra Club Hawaii Chapter Conservation Chair. Sierra Club strongly supports setting the a target of 100% renewable energy by 2040. We believe this is achievable and it will be a boon to our economy. It is time for bold action to break the grip of fossil fuels that ships money out of the state. We need a new energy economy.

Hawaii is uniquely blessed with solar and wind resources. Prices have dramatically dropped in recent years and capital is flowing in to the state to assist us in reaching our energy goals sooner than later.

Mahalo for your support! Steve Holmes

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support SB 715, HB 623 and HB 1512 setting a target for energy independence.

Sincerely, Steve Nadalin

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support SB 715, HB 623, and HB 1512, setting a long-term target for energy independence in Hawaii. I support setting a target of 100% renewable power by at least 2040.

We need our legislators to establish a strong vision for Hawaii's energy independence.

Right now, state law requires Hawaii to achieve 40% renewable energy generation by 2030. That means that in 2031, 60% of our power could still come from imported fossil fuels. That's not good enough. We need to set a target that matches the outcome we want to see—energy that is local, secure, and sustainable. Please pass these bills, which will set Hawaii on a path towards achieving 100% renewable power.

Thank you on behalf of all Hawaii residents, Stuart Karlan

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support SB 715, HB 623, and HB 1512, long-term target for energy independence in Hawaii is a worthy goal.

Sincerely, Tom Wallace

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

My family and I strongly support HB 623, SB 715, and HB 1512 that set long term targets for energy independence in Hawaii. We support the 100% renewable power target at or BEFORE 2040. Legislators: please establish a strong vision for Hawaii's energy self reliance & independence.

State law now requires the 40% renewable generation goal in 2030 - Auwe! too slow (that means 60% of energy still comes form imported oil/fuel.)

Please pass these bills that set Hawaii to achieve 100% local, renewable, sustainable power on or before 2040.

Sincerely, Vickie Fullard-Leo

TESTIMONY IN SUPPORT OF SB 715 SD1

Aloha Chair Baker, Vice Chair Taniguchi, and members of the committee:

I strongly support SB 715,HB 623 and HB 1512...setting a long term target for energy independence.

I also propose that legislation will be introduced to prevent the blockage,by structures or landscaping, of an already existing PV system in residential areas.

Sincerely, Laura Christensen

| From: | Walton Young |
|----------|--|
| To: | CPN Testimony |
| Subject: | In strong support of SB715 |
| Date: | Saturday, February 28, 2015 6:29:50 AM |

I strongly oppose. See attachment by Blue Planet from others if not in this email.

Sent from my iPad