



DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

DAVID Y. IGE
GOVERNOR

LUIS P. SALAVERIA
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Statement of
LUIS P. SALAVERIA
Director
Department of Business, Economic Development and Tourism
before the
**SENATE COMMITTEES ON
TRANSPORTATION AND ENERGY
AND
COMMERCE, CONSUMER PROTECTION AND HEALTH**
Wednesday, March 21, 2018
1:30 p.m.
State Capitol, Conference Room 225

in consideration of
HB1801, HD1
RELATING TO RENEWABLE ENERGY.

Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and Members of the Committees.

The Department of Business, Economic Development, and Tourism (DBEDT) supports HB1801, HD1, which modifies the definition of “renewable portfolio standard (RPS)” for electric utility companies to be based on ‘generation’ instead of ‘sales’ in order to more accurately reflect the percentage of renewable energy penetration in the State. It also establishes a renewable portfolio standard for gas utility companies of 100% by December 31, 2045, that mirrors that set for electric utility companies.

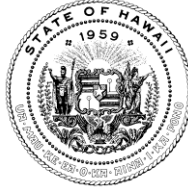
To fully meet the objectives of Act 97, Session Laws of Hawaii (SLH) 2015 establishing the 100% renewable portfolio standard (RPS) by 2045 and Act 38, SLH 2015 aspiring for greater energy security and self-sufficiency through the reduction and ultimate elimination of Hawaii’s dependence on imported fuels for electrical generation, the current method for calculating RPS for electric utility companies must be modified so it can accurately represent the percentage of renewable penetration in Hawaii. This is because the current method of calculating RPS is flawed as it is incongruent to compare ‘renewable electrical energy generation’ to ‘electrical energy sales’. This flaw causes the RPS to be inflated due to the denominator (‘sales’) excluding: (1) customer-sited grid-connected electrical energy generated; and (2) transmission and distribution (T&D)

energy losses that occur between the points of electrical energy generation and the customer meter where sales are measured.

Additionally, as Hawaii's energy sector transitions to renewable energy, it is important that all relevant entities are aligned and that we avoid creating an unfair playing field that may unintentionally harm consumers by promoting suboptimal long-lived investments in fossil fuels through gas-fired distributed electrical generation.

We strongly encourage the committee to pass this measure and are open to further discussion with other stakeholders on this measure.

Thank you for the opportunity to offer comments in support of HB1801, HD1.



DAVID Y. IGE
GOVERNOR

DOUGLAS S. CHIN
LIEUTENANT GOVERNOR

**STATE OF HAWAII
OFFICE OF THE DIRECTOR
DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS**

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CATHERINE P. AWAKUNI COLÓN
DIRECTOR

JO ANN M. UCHIDA TAKEUCHI
DEPUTY DIRECTOR

**TO THE HOUSE COMMITTEES ON
TRANSPORTATION AND ENERGY
AND
COMMERCE, CONSUMER PROTECTION, AND HEALTH**

**TWENTY-NINTH LEGISLATURE
Regular Session of 2018**

**Wednesday, March 21, 2018
1:30 p.m.**

**TESTIMONY OF DEAN NISHINA, EXECUTIVE DIRECTOR, DIVISION OF
CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER
AFFAIRS, TO THE HONORABLE LORRAINE R. INOUE, CHAIR,
TO THE HONORABLE ROSALYN H. BAKER, CHAIR
AND MEMBERS OF THE COMMITTEES**

HOUSE BILL NO. 1801, H.D. 1 - RELATING TO RENEWABLE ENERGY.

DESCRIPTION:

This measure amends the definition of “renewable portfolio standard” to more accurately reflect the percentage of renewable energy penetration in the State. It also establishes renewable portfolio standards and targets for gas utility companies that mirror those set for electric utility companies. H.D. 1 has an effective date of January 28, 2045, to facilitate further discussion.

POSITION:

The Division of Consumer Advocacy (“Consumer Advocate”) supports this bill and offers the following comments.

COMMENTS:

The Consumer Advocate supports the State's goal of 100% renewable energy on its electric grids by 2045, and so the Consumer Advocate supports the effect of this bill, which changes the Renewable Portfolio Standards ("RPS") calculation in Hawaii Revised Statutes ("HRS") section 269-91 from "sales" to "generation." This proposed modification will eliminate the existing "loophole" that could allow the State to achieve more than 100% of generation from renewable energy. The Consumer Advocate also appreciates the bill's intent to create an RPS for gas utilities, which should align more relevant entities in the State's push towards 100% renewable energy across sectors.

The proposed RPS for regulated gas utilities does, however, raise concerns that if the proposed statutory language establishing the RPS for gas utilities is adopted as-is, it could, among other things: 1) significantly increase the gas utilities' costs; 2) unintentionally create the incentive for the regulated utility to adopt a model that uses its non-regulated operations to serve customers' needs, as well as allow unregulated gas competitors to take advantage of the lack of regulation; and 3) cause regulated and unregulated gas customers to experience significant bill increases. Given that the technology to create renewable gas is less developed than the technology for renewable electricity, and the renewable gas market does not enjoy the same support that renewable electricity enjoys (e.g., lack of significant tax credits for renewable gas technologies), adopting the language used for the RPS for the electric industry, including the interim goals, will likely result in significant increases in costs to provide gas. In turn, these likely cost increases may create a favorable market for customers to rely on unregulated gas to meet their gas needs. The proposed RPS may also cause the regulated gas utility to incur significant costs, which ratepayers would ultimately bear.

If the measure is adopted, it may unintentionally promote suboptimal energy investments. While the preamble to this bill states "gas-fired *distributed* electrical generation" (emphasis added), the creation of an RPS for gas utilities under proposed HRS sections 269-A(a) and (b) in section 2 of this bill and the definition of "grid-connected" in section 3 of this bill would apply the RPS only to gas utilities that sell gas for grid-connected electrical energy generation. To address the potentially suboptimal investments of and arising from distributed gas-fired electrical generation, the Consumer Advocate respectfully suggests applying the RPS in the proposed statute to all gas companies, whether or not they are grid-connected or regulated.

Thank you for the opportunity to testify in support of this measure.

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

March 21, 2018
1:30 p.m.

MEASURE: H.B. No. 1801 HD1
TITLE: RELATING TO RENEWABLE ENERGY.

Chair Inouye and Chair Baker and Members of the Committees:

DESCRIPTION:

Amends the definition of "renewable portfolio standard" to more accurately reflect the percentage of renewable energy penetration in the State. Establishes renewable portfolio standards and targets for gas utility companies that mirrors those set for electric utility companies. (HB1801 HD1)

POSITION:

The Public Utilities Commission ("Commission") offers the following comments for consideration.

COMMENTS:

The Commission takes no position with respect to establishing a new RPS for the gas utility as proposed in Section 2 and Section 3. The Commission notes that at this time it is unclear how the specific data needed to track the gas utility's RPS status would be measured and reported. For example, the gas RPS is based on gas sold for electric generation, yet gas can be used for many other purposes as well. It is unclear how it could be determined whether the gas sold was actually used for electrical energy generation.

The gas utility may have additional information regarding their ability to measure and report this data.

The Commission takes no position with respect to redefining the electricity RPS as proposed in Sections 4 and 5. The Commission notes that at this time it is unclear how the specific data needed to track the electric utility's RPS status would be measured and reported.

Thank you for the opportunity to testify on this measure.



**Testimony to the Senate Committees on
Transportation and Energy
Consumer Protection and Health
Wednesday, March 21, 2018
State Capitol Conference Room 225**



House Bill 1801, H.D. 1: Relating to Renewable Energy

Aloha Chair Inouye, Chair Baker, and members of the Committees:

The Kaua'i Chamber of Commerce respectfully opposes HB 1801 HD1, which stipulates the state have a 100-percent renewable energy portfolio by December 31, 2045 on all gas sold for grid connected electrical energy generation.

The Kaua'i Chamber of Commerce appreciates the benefits of a more sustainable future; however, we see the potential for unintended consequences with the language contained in this legislation. This legislation introduces a strict regulation of private industry in order to comply with another burdensome government mandate to the existing renewable standard portfolio timeline. Additionally, this bill will negatively impact private consumer choice.

Thank you for your consideration as you deliberate on this legislation.



HAWAI'I LODGING & TOURISM
A S S O C I A T I O N

Testimony of

Mufi Hannemann
President & CEO
Hawai'i Lodging & Tourism Association

Committees on
Transportation and Energy
Consumer Protection and Health
March 21, 2018

House Bill 1801, H.D. 1: Relating to Renewable Energy

Chair Inouye, Chair Baker, and members of the Committees:

On behalf of the nearly 700 members of the Hawai'i Lodging & Tourism Association, the largest private sector visitor industry organization in the state, we respectfully oppose House Bill 1801, H.D. 1, which mandates a 100-percent renewable energy portfolio by December 31, 2045, on all gas sold for grid-connected electrical energy generation.

The HLTA supports initiatives for a more sustainable future; however, we see the potential for unintended consequences with the language contained in House Bill 1801, H.D. 1. We foresee the very strict regulation of private industry to comply with another addition to the existing renewable standard portfolio timeline. This one will have a negative impact on large facilities such as our hotels that are currently using, or are in the process of installing, methods of generation such as combined heat and power (CHP) units.

CHP units are supported by the federal government for their efficiency and the role they play in reducing emissions and lowering costs. Additionally, with regard to the matter of energy resiliency in the case of man-made or natural disasters, redundancy and power supply with diverse fuel and diverse generation technology are becoming increasingly important. We believe this bill will not only affect private consumer choice, but due to the lack and high cost of gas, will hurt the entities that are using or planning to use cogeneration as a means of improving efficiency, increasing reliability, diversifying energy options, and lowering costs.

Thank you for the opportunity to offer this testimony.

**Testimony before the Senate Committee on Transportation & Energy
& the Senate Committee on Commerce, Consumer Protection & Health**

H.B. No. 1801 H.D. 1

Relating to Renewable Energy

Wednesday, March 21, 2018
1:30 pm
State Capitol, Conference Room 225

Lisa Giang
Manager, Advanced Planning
Hawaiian Electric Company, Inc.

Chairs Inouye & Baker, Vice Chairs Espero & Tokuda, and Members of the Committees:

My name is Lisa Giang and I am testifying on behalf of Hawaiian Electric Company and its subsidiary utilities Maui Electric Company and Hawai'i Electric Light Company (collectively, the "Companies"). We cannot support this bill in its current form.

HB 1801, HD 1, in part, establishes a 100% RPS by 2045 for the gas utilities to align with the State's policy to transition away from fossil fuels and towards renewable energy. The Companies support this part of the bill and offer the following comments for consideration:

1. To ensure progress towards the 100% RPS by 2045, HB 1801 HD 1 should establish intermediate goals similar to the electric utilities from 2030 on.
2. The gas RPS as written in the bill applies only to the regulated gas utilities while the unregulated gas market could remain on fossil fuels and not transition to renewable energy. This would leave a major gap in the State's clean energy policy allowing customers the option to disconnect from the electric grid or the regulated gas pipeline network

and self-generate using fossil fuels without any oversight or accountability.

In addition to creating a gas RPS, HB 1801, HD 1 also includes changes to the definition of the RPS for electric utilities and this is where our concerns lie, specifically regarding the timing of these changes. The proposed definition includes all grid-connected energy systems – which includes fossil fueled customer-owned generation over which we have no control – and therefore exposes us to non-compliance if customers choose to invest in fossil gas-fired cogeneration. Applying this new definition to our 2020 RPS requirement, which is less than two years away, unfairly increases the risk to us of not achieving the 30% RPS in 2020. Applying the change instead to our 2030 RPS and beyond would be a more reasonable timeframe to align the market realities and public policy, and also mitigate our concern over customer-owned fossil fueled generation as the new renewable gas RPS begins to kick in.

Thank you for this opportunity to testify.



March 20, 2018

**TESTIMONY IN OPPOSITION TO
HOUSE BILL 1801, HOUSE DRAFT 1, RELATING TO RENEWABLE ENERGY**

Senate Committee on Transportation and Energy
The Honorable Lorraine Inouye, Chair
The Honorable Will Espero, Vice Chair

Senate Committee on Commerce, Consumer Protection and Health
The Honorable Rosalyn Baker, Chair
The Honorable Jill Tokuda, Vice Chair

Wednesday, March 21, 2018 – 1:30 p.m.
State Capitol, Conference Room 225

Chairs Inouye and Baker and members of both Committees,

Thank you for providing Par Hawaii with this opportunity to submit testimony on House Bill 1801, House Draft 1, Relating to Renewable Energy. My name is Lance Tanaka, director of government and public affairs for Par Hawaii. Par Hawaii, Inc. and Par Hawaii Refining, LLC are subsidiaries of Texas-based Par Pacific Holdings, Inc. Collectively, we are Par Hawaii, the leading supplier of petroleum products in the Islands.

HB 1801, HD 1 amends the definition of “renewable portfolio standard” to more accurately reflect the percentage of renewable energy penetration in the state. It establishes renewable portfolio standards and targets for gas utility companies that mirror those set for electric utility companies.

Par Hawaii respectfully opposes certain sections of HB 1801, HD 1 as currently drafted. We offer an amendment to Section 4, §269-92 (c) Renewable portfolio standards for electric utility companies. We are also opposed to the establishment of renewable portfolio standards and targets for gas utility companies at this time.

Clarifying Amendment

As written, it is not clear in Section 4, §269-92 (c) Renewable portfolio standards for electric utility companies, whether onsite self-generators of electricity, such as Par Hawaii Refining’s co-generation (“co-gen”) unit, are excluded from the RPS electric utility renewable energy calculation. To clarify that independent “self-generator” units that may,

Testimony opposing specific sections of
H.B. 1801, H.D. 1, Relating to Renewable Energy
Lance N. Tanaka, Par Hawaii
Senate Committee on Transportation & Energy
Senate Committee on Commerce, Consumer Protection & Health
Hawaii State Capitol, Room 225
Wednesday, March 21, 2018 – 1:30 p.m.
Page 2

at times, produce excess electricity that is exported to the grid (as opposed to merchant independent power producers who are designed specifically for the purpose of selling electricity into the grid) are excluded from the RPS calculation, we offer the following amendment for your consideration:

(c) All electric grid-connected energy systems shall be one hundred per cent renewable energy systems by December 31, 2045; provided that generation by an independent, non-utility power generation unit that is connected to the Hawaii electric system for continuity of operation, and/or used for emergency service in the event of failure of the normal supply from the Hawaii electric system shall be excluded from such calculation as set forth in subsection (a).

Following are reasons for the exclusion:

- At the Par Hawaii refinery, electricity imported from the grid supplements power being generated by our co-gen unit in running the plant. While we also export power to the grid, when excess power not required by our internal needs is available, the connection to the grid is primarily to help ensure that there is immediate backup in the event that our co-gen goes offline.
- During a sudden loss of power when there is no backup source, processing units shut-down abruptly putting undue stress on the equipment and resulting in damage that could take several days to repair. This puts a strain on existing inventories of fuel until the refinery can be restarted. Therefore, being connected to the grid is important to our continuity of operation and the security of the state's fuel supply.
- The co-gen is an essential tool that not only supplies power to run the plant, it also enables Par to balance its refining operations using the company's own crude oil for fuel. It does this by deriving streams of gas oil, naphtha and other byproducts during the production of jet fuel, diesel, gasoline and other petroleum products. The byproducts are used interchangeably as fuel to run the co-gen, depending on the products being refined at the time.

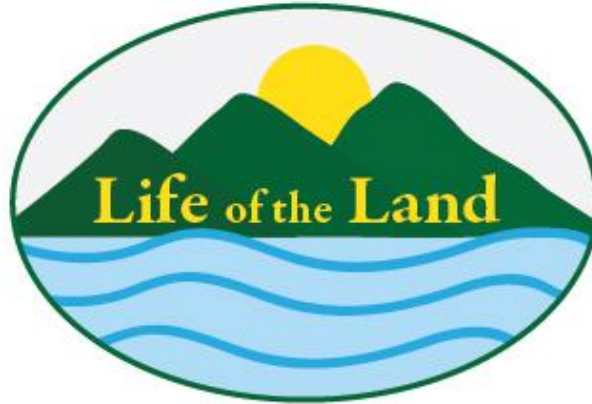
Testimony opposing specific sections of
H.B. 1801, H.D. 1, Relating to Renewable Energy
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Senate Committee on Transportation & Energy
Senate Committee on Commerce, Consumer Protection & Health
Hawaii State Capitol, Room 225
Wednesday, March 21, 2018 – 1:30 p.m.
Page 3

- This fuel flexibility is key to our operational efficiency. Switching to a fixed renewable fuel so that our electricity exports to the grid comply with the RPS calculation is not an option that is available to us currently. We are unable to source renewable fuel reliably and feasibly. Furthermore, importing renewable fuel will impact our production slate by displacing crude oil byproducts that were previously used to run our co-gen unit. This would generally result in our needing to export these components at a potential financial loss.

Opposition to RPS Mandate for Gas Utility Companies

Par Hawaii is also concerned that its gas utility customers, such as Hawaii Gas, will be adversely impacted if subjected to RPS requirements at this time. Our refinery supplies Hawaii Gas with feedstock that enables them to produce synthetic natural gas for consumer and commercial uses. It would seem prudent that more thought and planning are needed before gas utilities are required to comply with a RPS mandate, similar to the path taken by electric utilities. Acting rashly to apply to the gas industry a program designed over considerable time for electric utilities, is likely to result in negative unintended consequences and should be avoided. As an initial step, we recommend incorporating biogas in the Hawaii biofuel study conducted by the Hawaii Department of Business, Economic Development & Tourism and reported to the Legislature in 2012.

Thank you for allowing Par Hawaii the opportunity to present this testimony for the Committees' consideration.



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COMMITTEE ON TRANSPORTATION AND ENERGY

Senator Lorraine R. Inouye, Chair
Senator Will Espero, Vice Chair

COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH

Senator Rosalyn H. Baker, Chair
Senator Jill N. Tokuda, Vice Chair

Wednesday, March 21, 2018
1:30pm
Conference Room 225

HB 1801, HD1 RELATING TO RENEWABLE ENERGY.

STRONG SUPPORT

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and Members of the Committees

Life of the Land is Hawai`i's own energy, environmental and community action group advocating for the people and `aina for 47 years. Our mission is to preserve and protect the life of the land through sound energy and land use policies and to promote open government through research, education, advocacy and, when necessary, litigation.

This is a very important fix to the long troubled definition of Renewable Portfolio Standard (RPS). It both fixes how percentage is calculated, and brings regulated utility operations of the gas company under the RPS. Two more fixes will be needed in the future. Renewables should only mean renewables, and every entity should cease every use of fossil fuels and high-greenhouse-gas emitting renewable energy by 2040 if not sooner.

Mahalo

Henry Curtis,
Executive Director



Email: communications@ulupono.com

SENATE COMMITTEES ON TRANSPORTATION & ENERGY AND COMMERCE, CONSUMER
PROTECTION, & HEALTH

Wednesday, March 21, 2018 — 1:30 p.m. — Room 225

Ulupono Initiative Supports HB 1801 HD 1 with Amendments, Relating to Renewable Energy

Dear Chair Inouye, Vice Chair Espero, Chair Baker, Vice Chair Tokuda, and Members of the Committees:

My name is Kyle Datta and I am General Partner of Ulupono Initiative, a Hawai'i-based impact investment firm that strives to improve the quality of life for the people of Hawai'i by working toward solutions that create more locally produced food; increase affordable, clean, renewable energy; and better management of waste and fresh water. Ulupono believes 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 supports HB 1801 HD 1 with Amendments, which fixes the renewable portfolio standard (RPS) for electrical energy by removing the double count from the formula and adding a gas RPS.

Ulupono **strongly supports** the correction to the RPS formula contained in Section 4 on page 11 of HB 1801 HD 1, modifying Section 269-92, Renewable Electric standards for electric utilities. We concur with the legislative findings in the preamble as to the deficiencies in the current electrical utility RPS formula.

Why is this so important? 100% should mean 100%

Under the current definition, the double counting of renewable distributed energy resources by using "sales" instead of "generation" in the denominator results in the RPS that overstates our actual progress. For the 2020 goal of 30 percent, the actual renewable generation as a percentage of total generation is 24 percent. Similarly, for the 2030 RPS goal of 40 percent, the actual renewable generation is 32 percent. Correcting the formula would save 1.4 MM bbls of oil in 2030 — nearly 3 percent of total state energy use, or the equivalent of adding more than 400 MW of solar power to the grid.

In addition, by requiring all grid connected electric utility generation to be 100%

Investing in a Sustainable Hawai'i



renewable by 2045, the legislature is addressing grid connected cogeneration, which closes that loophole. Furthermore, the electric utilities can use this language in the justification for approving or denying interconnections to new generation units that use fossil fuel energy.

Minor amendments to this subsection include the observation that the language “but excluding electrical generation used exclusively for emergency service in the case of failure of the normal supply from the Hawaii electrical system” is well intentioned, but may be unnecessary because Section 269-92, subpart (f) already contains a large number of exclusions for events outside the company’s reasonable control, that include natural and manmade emergencies. Thus, the additional exclusion may create unnecessary record keeping and some confusion.

Ulupono supports the intent of the applying the RPS to the gas company, raises some concerns

Ulupono understands the intent of Section 269-A, 269-B, and 269-C is to ensure that gas used for electrical generation is included under the RPS. We support this intent. We raise some concerns about how the language and definitions in Sections 269 and 269-92 will interact.

In Section 269-A, if a regulated gas utility sells gas to a regulated electrical utility, then by 2045, the percent of gas sold (measured in renewable therms/total therms) must equal 100%. We note that once the RPS definition is fixed in Section 269-92, the regulated electrical utility must ensure that all generation is 100% renewable. Thus, under Section 269-92, if a regulated electric utility has a gas fired generator, and continues to use gas, all the gas it purchases, whether from a regulated utility or independent supplier, must be 100% renewable for the regulated electrical utility to be in compliance. Thus, Section 269-92 is more broad, and we are unclear on the benefit of Section 269-A, beyond confirmation that the gas sold from a regulated gas utility to a regulated power company in 2045 is indeed 100% renewable.

Given this, our recommendation is to keep this bill clean and focus on Section 269-92.

Thank you for this opportunity to testify.

Respectfully,

Kyle Datta
General Partner



Before the Senate Committees on Transportation and Energy & Commerce, Consumer Protection, and Health
Wednesday, March 21, 2018, room 225, 1:30 p.m.
HB 1801 HD 1: RELATING TO RENEWABLE ENERGY

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and members of the Committees,

On behalf of the Distributed Energy Resources Council of Hawaii (“DER Council”), I would like to testify in strong support for HB 1801 HD 1, which amends the renewable energy portfolio (“RPS”) to more accurately reflect the amount of renewable energy generation in Hawaii based upon electricity generation rather than electricity sales, and which creates an RPS for gas utilities. The DER Council is a nonprofit trade organization formed to assist with the development of distributed energy resources and smart grid technologies to support an affordable, reliable, and sustainable energy supply for Hawaii.

The Hawaii state legislature amended the RPS from 40% renewables for electricity generation by 2030 to 100% renewables for electricity generation by 2045. However, many people and even some stakeholders who have worked closely on these issues mistakenly believe that 100% renewables by 2045 as per our current accounting for the RPS literally means that 100% of all energy generated and sold in Hawaii will come from renewable generation. Instead, because the current language in the RPS, the state’s RPS could actually meet the 100% mandate, but still generate some electricity from fossil fuels. In fact, the more roof top generation that is included in the calculation, the greater the amount of fossil fuels that could be included in the RPS at 100%.

In addition, DERC strongly supports the development of an RPS for gas utilities. Natural gas is another form of fossil fuel, and the use of natural gas for electricity generation should have a reasonable plan to join Hawaii’s 100% renewable energy goal.

The DER Council supports HB 1801 HD 1 because the proposed amendment clarifies the accounting for the RPS by basing the entire RPS upon electricity generation, and because HB 1801 HD 1 rightfully includes gas utilities in Hawaii’s 100% renewable mandate. In this way HB 1801 HD 1 ensures that the RPS will reflect what most think that it already means: a complete independence from imported fossil fuels by 2045.

Thank you for the opportunity to testify

Leslie Cole-Brooks
Executive Director

DER Council of Hawaii



ORGANIZING *for* ACTION

To: The Senate Committee on Transportation and Energy
From: Brodie Lockard, OFA Hawaii, 262-1285
Date: Wednesday, March 21, 2018

In strong support of HB 1801 HD1

Dear Chair Inouye, Vice Chair Espero and Committee members--

I am the Hawaii Climate Lead for Organizing for Action, a progressive group that played a lead in electing President Barack Obama twice. OFA Hawaii strongly supports HB 1801 HD1, with an amendment that it applies to all regulated activities of the gas company, rather than just "grid-connected electrical energy generation."

OFA Hawaii also believes that the proposed §269-A(e)(10) and (11) are too open to interpretation and leave too much leeway to circumvent the bill's intent.

Whatever LNG is used for, it will eventually be burned, and it's the burning that needs monitoring and regulation. Grid connected electrical energy generation may be only a small part of its use. Hawaii Gas's website says it's used for heat, hot water, "manufacturing processes, drying, cooling," and "natural gas can also be used for ... electricity production, ground and marine transportation and various industrial applications."

LNG is not clean. Burning it does emit less CO₂ than coal and oil. But LNG is 85 to 95% methane[1], a global warming gas 84 times as potent as CO₂ over a 20-year period[2]. About 25% of the manmade global warming we're experiencing today is caused by methane emissions. And the largest source of industrial methane emissions is the oil and gas industry[2].

No matter where it is mined, LNG hurts the environment right here by worsening climate change. It leaks at drilling sites, along pipelines, at compression stations, at storage facilities and throughout the networks of piping that carry it to homes[3]. Washington, D.C. alone has 5,893 natural gas leaks[4]. And transporting LNG to Hawaii burns fuel, producing even more greenhouse gases.

LNG is not cost-effective over the long term. The price of renewables like wind and solar, and battery storage, continues to plummet. Hawaii Gas is building infrastructure to increase LNG imports that would cost \$200 million by their own estimate[5], and they've already applied for a rate hike. We should not spend another penny on fossil fuel infrastructure. The long-term cost of delaying full use of renewable energy—i.e., more rapid climate change—is already clear in our state.

LNG is not needed to diversify Hawaii's fuel supply. We have wind, solar, geothermal, hydroelectric, deep sea water chilling, and biomass, with ocean thermal and wave energy on the way. All we need are

batteries and resolve. LNG is not renewable and should just fade away as we reach for our goal.

Finally, LNG is not safe. Fracking to obtain it contributes to all manner of calamities from breast cancer to flammable tap water to earthquakes[6]. It's no wonder that Vermont, New York, Maryland, several European countries and Hawaii County have all banned the practice.

Any effort and expense to use LNG here is far better put toward reaching our renewables goal. LNG imports are a direct obstacle to that goal.

Thank you for this opportunity to submit testimony in strong support of HB 1801 HD1.

Brodie Lockard
Hawaii Climate Lead, Organizing for Action

[1] https://energy.gov/sites/prod/files/2013/04/f0/LNG_primerupd.pdf

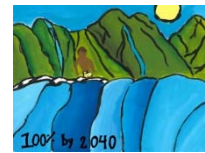
[2] <https://www.edf.org/methane-other-important-greenhouse-gas>

[3] <https://fivethirtyeight.com/features/methane-is-leaking-all-over-the-place/>

[4] <http://pubs.acs.org/doi/full/10.1021/es404474x>

[5] http://www.hawaiiigas.com/media/1301/hawaii-gas_report_the-facts-about-lng-for-hawaii.pdf

[6] <https://www.pbs.org/newshour/science/earthquakes-triggered-by-fracking>



**SENATE COMMITTEE ON TRANSPORTATION AND ENERGY
SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH**

March 21, 2018, 1:30 P.M.

Room 225

(Testimony is 4 pages long)

TESTIMONY IN STRONG SUPPORT OF HB 1801 HD1, SUGGESTED AMENDMENT

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and members of the Committees:

Blue Planet Foundation **strongly supports** HB 1801 HD1, which revises Hawai'i's historic 100% renewable energy standard to ensure that **"100%" means "100%."**

This important measure does two things. First, it implements a needed accounting correction for the state's renewable portfolio standard (RPS) calculation. Presently, the state's RPS calculation can provide utilities with "double credit" for some distributed energy sources, such as rooftop solar. This leads to the outcome that the calculated RPS can be greater than the actual percentage of renewable energy on Hawai'i's electric grids. House Bill 1801 would revise the RPS accounting calculation to address this potential outcome.

Second, House Bill 1801 expands the RPS to include all grid-connected generation, including gas-fired generation. This helps to wean Hawai'i from imported fossil fuels while reducing unfairness in the energy market by requiring all types of generation on the electricity grid to comply with the RPS.

Blue Planet respectfully requests that the Committee amend HB 1801 HD1 to apply the RPS to all regulated gas sold in Hawai'i—not just gas that is connected to the electricity grid. Our suggested language is at the end of this testimony.

This is a critical measure for ensuring **transparency, consistency, fairness, and consumer confidence** in Hawai'i's 100% renewable energy target.

THE SUCCESS AND IMPORTANCE OF THE RPS LAW

Hawai'i's RPS law has been a resounding success. After various iterations through roughly the past fifteen years, in 2015 the legislature set a vision for Hawai'i's energy security, economic viability, and environmental protection by setting a target of 100% renewable energy by 2045. The 100% RPS law has since impacted the energy system exactly as intended, and is driving energy progress in the state. It has strengthened collaborations and fostered alignment on a variety of regulatory issues. It has set market expectations. Hawai'i is now securing 100%

info@blueplanetfoundation.org

55 Merchant Street 17th Floor • Honolulu, Hawai'i 96813 • 808-954-6142 • blueplanetfoundation.org

renewable energy projects, able to provide energy at any time of day or night, for a stable cost that is substantially less than the cost of fossil fuel. With strong Public Utilities Commission (PUC) guidance and oversight, it is resulting in utility power supply plans that will achieve the mandate ahead of schedule, while simultaneously saving consumers billions of dollars compared to the fossil fuel status quo. **The state is on track to achieve the vision set by the legislature for renewable electricity, including both the near-term and long-term RPS requirements.**

100% MEANS 100%

To the credit of the Hawaiian Electric Companies, the recent electric utility power supply plans appear to target a fully renewable system, even though a loophole in the RPS calculation improperly accounts for distributed energy generation. To illustrate, the forecasted Hawaiian Electric RPS for 2045 is as high as 183% (the maximum for a properly calculated renewable standard should be 100%). In short, this is because distributed energy resources, such as rooftop solar, impact the RPS calculation in a way that essentially provides a double credit.

While power supply planning to date has not been hampered by this faulty calculation, it nonetheless **creates uncertainty and lack of clarity for consumers**. This is a long-standing problematic feature of Hawai'i's energy targets. As an example, the circa-2008 clean energy initiative goal of 70% renewable energy was actually a 40% renewable energy goal, with a supporting energy efficiency goal of 30%. Consumers were endlessly confused by the reference to "70%."

Fixing the RPS calculation is intended to avoid repeating that mistake. **100% renewable energy should mean 100% renewable energy.**

100% MEANS ALL GRID-CONNECTED GENERATION—INCLUDING GAS

House Bill 1801 wisely includes all grid-connected generation in the calculation of the state's RPS. This addresses one of the primary concerns with the current approach where distributed energy resources might also include fossil fuel generation (likely to be gas-fired generation). **This type of natural gas-fired generation could render it impossible for electric utilities to meet their renewable energy goals.**

WHAT IS RENEWABLE NATURAL GAS?

Consumers sometimes confuse "natural gas" with renewable energy. As most commonly used, natural gas is "natural" in the same way that oil and coal are "natural." **Natural gas is a fossil fuel.** It is not renewable. Thus, as noted above, using fossil fuel-based natural gas is inconsistent with a shift to 100% renewable energy.

In Hawai'i, The Gas Company (dba Hawai'i Gas) primarily uses natural gas in two forms. It creates synthetic natural gas (SNG), primarily from oil products. It also uses liquefied natural

gas (LNG), which is gas drilled from a well and then liquefied for shipping. Both of these are fossil fuels.

However, The Gas Company also currently uses some gas that is derived from renewable sources. Approximately 2.8% of its gas supply presently comes from a renewable feedstock.¹

In September 2017, Hawai'i Gas received approval from the Hawai'i PUC to begin installing equipment to capture and process biogas from the Honouliuli Wastewater Treatment Plant on O'ahu.² This is a renewable "biogas" created during the process of treating wastewater—i.e. renewable natural gas (RNG). The project is expected to be up and running by the end of 2018.

Previously, this gas was flared (i.e. burned) at the plant. With this project, the City and County of Honolulu will now derive revenue by selling the gas, rather than wasting it. This is a remarkable win-win solution.

As a result, renewable natural gas is set to soon comprise roughly 5% of the gas supply on O'ahu. Blue Planet Foundation strongly supports these efforts to transition to renewable gas.

Scaling this will require the development of additional renewable natural gas sources—particularly identifying new win-win solutions for local private and public entities, such as that developed with Honouliuli. These might include: wastewater treatment facilities, landfills, other waste sources, local crops, or renewable hydrogen. Suppliers in other locations may also become an option. On the U.S. mainland, Clean Power Fuels is currently marketing a renewable natural gas product called "Redeem." This is collected from various waste sources, such as landfills and farms, and then distributed across the country via a natural gas pipeline system. It is presently used to fuel thousands of vehicles each day.

SUGGESTED AMENDMENT

Blue Planet Foundation feels strongly that Hawai'i should extend the benefits of the RPS to natural gas utility companies. This is consistent with the states overarching goal of reducing—and ultimately eliminating—all imported petroleum for energy use. This amendment would also reduce unfairness in the energy market which may result from requiring electric utilities, but not gas utilities, to comply with the renewable standards.

Our suggested amendment to Section 2 of HB 1801 HD1 is as follows:

"§269-A Renewable portfolio standards for gas utility companies.

(a) The renewable portfolio standard for a gas utility company

¹ See Hawaii Gas Annual Renewable Energy Report to PUC (March 2017), *available at* <https://puc.hawaii.gov/wp-content/uploads/2013/04/00005F5A.pdf>

² See <http://www.hawaiigas.com/clean-energy/renewable-natural-gas/>

means total heat energy in therms from renewable gas sold divided by total heat energy in therms from gas sold, expressed as a percentage. [~~For the purposes of this definition, the terms "renewable gas sold" and "gas sold" are limited to gas sold for grid-connected electrical energy generation under regulated gas utility company operations in the State.~~]

(b) Each gas utility company [~~that sells gas for grid-connected electrical energy generation by regulated utility operations in the State~~] shall establish a renewable energy portfolio standard of one hundred per cent by December 31, 2045.

Finally, we request that the bill be amended to take effect upon arrival.

CONCLUSION

Blue Planet Foundation strongly supports HB 1801 HD1 with our suggested amendment to help **accelerate Hawai'i's clean energy progress, increase fairness across the energy sectors, and spur innovation and development in new, locally produced, renewable fuels**. This is an important measure for ensuring transparency, consistency, fairness, and consumer confidence in Hawai'i's 100% renewable energy target.

We look forward to working with the legislature on this key policy.

Thank you for the opportunity to testify.



Testimony to the Senate Committee on Transportation and Energy and Senate Committee on Commerce, Consumer Protection, and Health

Wednesday, March 21, 2018 1:30 p.m.
Conference Room 225, State Capitol
RE: House Bill 1801 HD 1

Chair Inouye, Vice Chair Espero and Members of the Transportation and Energy Committee
Chair Baker, Vice Chair Tokuda and Members of the Commerce, Consumer Protection, and Health Committee

Proposed Bill

HB1801 HD 1 proposes 1) to amend the definition of renewable portfolio standard (RPS) for electric utilities and 2) to require all gas sold for “grid-connected electrical energy generation” by the regulated gas utility operations in the state to become more renewable over time by mandating that a renewable energy portfolio standard of one hundred per cent by December 31, 2045 be imposed.

Summary of Position

Hawaii Gas **opposes** the proposal in HB 1801 HD 1 to establish a renewable portfolio standard mandate on gas utilities for “grid-connected electrical energy generation” (“Proposed Gas RPS”). The Proposed Gas RPS should not be imposed without further study and analysis on the effects of requiring the use of renewable natural gas (“RNG”). The effect the proposal would have on prices that gas utility customers would have to pay and on the viability of gas utilities and their ability to provide reliable gas utility services at reasonable rates should also be fully evaluated. It would be imprudent and irresponsible to impose the mandate embodied in the Proposed Gas RPS before conducting objective and credible research and analysis on the impact and effects of the Proposed Gas RPS to avoid unintended consequences.

Background

Recently, there have been a number of misleading statements and information about the effect of grid-connected electrical generation fueled by gas, and the role of liquefied natural gas (“LNG”) in Hawaii and climate change. To put these claims in context, Hawaii Gas makes up roughly 2% of Hawaii’s overall energy mix and comprises much less than 5% of the entire State of Hawaii’s greenhouse gas emissions (as reported annually to the U.S. Environmental Protection Agency.) Most of Hawaii Gas’ fuel source is Synthetic Natural Gas (“SNG”), which is created as a byproduct of the oil-refining process on-island. The main uses of gas in Hawaii are for cooking and as an efficient way to heat water. It’s also important to note that fuel costs are a pass through to gas utility customers, and why the company continues to actively pursue cost-effective and reliable types of fuels on behalf of its customers. It is Hawaii Gas’ obligation to operate with prudence and its customers’ best interests in mind. Renewable natural gas is one of the fuels that Hawaii



Gas is pursuing for its customers, but not at any cost. Hawaii Gas also uses a small amount of LNG as an emergency back-up fuel and to displace a limited portion of its oil-based SNG for supply diversity and resiliency purposes. This roughly \$13 million initiative (not \$200 million as some mistakenly claim) is to address the industry and state’s concern about any supply disruptions or instability in the local refinery marketplace. What is not widely mentioned is that LNG can also be produced from renewable sources, such as from wastewater treatment plants, landfills and energy crops. The gas is liquefied to transport it cost-effectively when no pipeline is available. However, it is unclear whether LNG from renewable sources may be obtained cost-effectively in sufficient quantities. Without proper analysis and credible fact-finding on this matter, legislating based on fear and propaganda will only lead to bad policy and significant cost increases for customers. Being too quick to impose restrictions like the ones proposed in HB 1801 HD1, can cutoff life-saving options for policy makers when developing a comprehensive statewide energy and resiliency policy for Hawaii. For example, a combined heat and power installation can keep a hospital running if the power goes out during a natural or man-made disaster. A hospital in Texas was able to continue operations and care for patients when the power went out during Hurricane Harvey¹. This example further emphasizes the need for a comprehensive statewide energy and resiliency plan for Hawaii focusing on achieving highly efficient, low-carbon, low-cost and highly resilient energy options for the benefit of Hawaii businesses and residents.

Biogas production technologies, while the subject of significant small-scale research efforts at various universities and labs, and modest, albeit heavily subsidized, commercialization efforts abroad, do not benefit from the same level of state and federal financial incentives, nor resultant investment, as those associated with renewable electricity. This lack of financial incentives, combined with low natural gas prices in most of the US mainland, has resulted in a far lower level of commercialization of renewable natural gas (“RNG”) projects relative to other alternative energy sources. To our knowledge, no other state has imposed an RPS on any gas utility in the United States. The challenges that biogas faces are like what biofuels face, as referenced in the 2012 DBEDT report to the legislature on biofuels, which did not include a study of biogas or gas from renewable sources.

To develop the RPS for electric generation that exists today, there was at least a decade of studies and discussions with stakeholder groups led by DBEDT, as well as proceedings conducted by the PUC, in which the electric utilities themselves participated in. The same cannot be said about the Proposed Gas RPS with respect to gas utilities.

Incorporating renewable gas energy into a gas utility business is a function of availability, reliability and cost, and further studies are required to prudently determine the feasibility of mandating the Proposed Gas RPS on gas utilities.

Today, the only renewable gas energy resources available to Hawaii Gas are the hydrogen produced at our SNG Plant from recycled wastewater and the waste gas (which can be cleaned and processed into RNG) produced at wastewater treatment plants and landfills, mainly on Oahu, which total

¹ <https://www.energy.gov/eere/amo/articles/chp-installation-keeps-hospital-running-during-hurricane-harvey>



about 4 million therms per year or less than one-seventh of the state’s total annual gas demand. Biogas produced at municipal sites is neither scalable, meaning it cannot be substantially increased, nor is it readily available to Hawaii Gas in sufficient quantities (with the notable exception being the biogas contract awarded in August 2016 until December 2024, for the Honouliuli Wastewater Treatment Plant², which will finally come online by the end of 2018 meeting less than one-twentieth of the Oahu demand.) Thus, while municipal biogas may eventually meet a portion of the state’s annual demand and provide a revenue stream to the county, it will be unable to meet much of the State’s needs. Additionally, the City and County of Honolulu has indicated it may want to use a majority of its biogas in its own operations.

In seeking ways to meet existing demand at a reasonable price for its customers using RNG, Hawaii Gas has spent extensive time and resources exploring and investing in initiatives to produce or import RNG. Hawaii Gas conducted a pilot project at its SNG Plant to perform gasification using fats and oils, which unfortunately, yielded uneconomical results, as the biogas could not be produced at scale and would have resulted in significantly higher prices for our customers. Similarly, Hawaii Gas has found that at this time, importing RNG from the mainland results in materially higher prices for Hawaii’s gas users.

Oahu Land, Water and incentives for farmers and incentive tax credits from the State may be required to produce renewable natural gas locally.

RNG can be produced from food waste, energy crops and various other forms of biomass. For RNG to scale sufficiently, the industry must explore new and innovative approaches to produce RNG from various feedstocks and energy crops. The challenge is to do this cost-effectively, reliably, and at a scale that meets demand. Hawaii Gas has also been working with several parties over the past few years to explore the use of purpose grown energy crops coupled with advanced treatment and anaerobic digestion technology.

In this arena, finding available arable land with sufficient water resources is presenting a challenge. As most of the demand for gas is on Oahu, and transporting gas among Hawaii’s islands adds to costs, it appears to Hawaii Gas that the only likely viable location for purpose grown solutions is Oahu. Hawaii Gas studies have shown that roughly 15,000 to 30,000 acres, plus water rights, would be required to convert current SNG volumes to 100% RNG. To-date, Hawaii Gas has been unable to locate even 1,000 acres of suitable irrigated land on Oahu. As with any land acquisition in the state, Hawaii Gas is competing with land needs for food and housing, which are critical needs for the state as well.

Accordingly, further study and analysis must be conducted to determine whether there is sufficient land, water, and other resources needed to produce sufficient amounts of RNG cost-

² In August 2016, the City and County of Honolulu awarded Hawaii Gas the contract for biogas at the Honouliuli Wastewater Treatment Plant. Biogas production is estimated to be 800,000 therms per year. The contract term ends December 2024. Hawaii Gas filed its Application with the Public Utilities Commission in September 2016 to obtain approval for capital expenditures and to enter into a fuel supply agreement with the County. The Application was approved in September 2017.



effectively to satisfy the Proposed Gas RPS if it were to be mandated.

Conclusion

The Proposed Gas RPS mandate should not be adopted without further study and analysis on the effect of requiring the use of RNG, including increasing prices for consumers and the mandate’s effect on gas utilities and their ability to provide reliable gas utility services at reasonable rates. Further studies are required to determine the technical and economic feasibility of adopting the Proposed Gas RPS as a mandate. It would be imprudent and irresponsible to impose the Proposed Gas RPS before conducting objective and credible research and analysis on the impact and effects of the Proposed Gas RPS to avoid negative unintended consequences.

Thank you for the opportunity to testify on HB 1801 HD 1.



Office of
ENERGY EFFICIENCY & RENEWABLE ENERGY

ADVANCED MANUFACTURING

CHP Installation Keeps Hospital Running During Hurricane Harvey

SEPTEMBER 8, 2017



[Home](#) » CHP Installation Keeps Hospital Running During Hurricane Harvey



Brays Bayou next to the TECO CHP installation under normal conditions in October 2012.



Brays Bayou next to the TECO CHP installation during flooding caused by Hurricane Harvey in August 2017. (Photo courtesy TECO)

Our thoughts and concerns are with all the people affected by natural disasters like the recent hurricanes and storms. With any major storm, energy reliability and security are major concerns for those in the storm's path. Medical facilities in particular face significant risks if the power goes out – the ability to use energy for heating and cooling is crucial to patient care, protection of long-term medical research projects, and maintaining living and working conditions within hospitals.

While much of Houston, Texas, and the surrounding areas, were faced with uncertainty as Hurricane Harvey made landfall, the Texas Medical Center – the largest medical center in the world – was able to sustain its air conditioning, refrigeration, heating, sterilization, laundry, and hot water needs throughout the storm thanks to the [combined heat and power \(CHP\) installation](#) operated by Thermal Energy Corp (TECO). CHP is a way to generate on-site electric power and useful thermal energy (heat) from a single fuel source. TECO's CHP system at the Texas Medical Center uses natural gas to deliver 48 MW of power to provide reliability and security to the 19 million square foot medical campus even in the event of prolonged grid outages.

Even with rising water levels in the Brays Bayou and other areas around the CHP system, the energy infrastructure operated without interruption through the storm. Although the CHP system was designed primarily to increase energy efficiency and reduce energy costs for the medical center, the events of Hurricane Harvey showed that CHP was also a crucial part of the emergency preparedness plan and helped staff at the Texas Medical Center focus on patient care without fear of losing power. The Texas Medical Center includes medical research and care facilities like the University of Texas MD Anderson Cancer Center, Texas Children's Hospital, and the 16 other institutions.

During its design and construction, the CHP system at the Texas Medical Center received support from the Advance Manufacturing Office through its [CHP Technical Assistance Partnerships \(CHP TAPs\)](#). CHP TAPs work local officials and companies to promote and assist in transforming the market for CHP, waste heat to power, and district energy technologies and concepts throughout the United States. TECO, which operates the CHP system at the Texas Medical Center, is also a partner in the Better Buildings [CHP for Resiliency Accelerator](#) which supports CHP solutions to keep critical infrastructure – like hospitals, data centers, research facilities, and utilities –

operational and reliable regardless of external events. Public-private partnerships like these help to drive innovative solutions that ensure energy security and reliability to meet the needs of Americans even during catastrophic events like the recent hurricane in Texas.

As was Hurricane Harvey, Hurricane Irma is a powerful and dangerous storm, and so preparedness is essential. Those in its potential path are urged to follow the instructions of state and local authorities.

Learn more about the TECO CHP TAP at Texas Medical Center [here](#).



TAYLOR JACKSON

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HB-1801-HD-1

Submitted on: 3/18/2018 10:24:32 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Janet Graham	Testifying for 350.org	Support	No

Comments:

HB1801 HD1 Hearing on Wednesday, March 21, at 1:30pm in conference room 225.

TRE and CPH

Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and Members of the Committees:

I am writing in strong support of **HB1801 HD1**. This bill would amend the renewable portfolio standard (RPS) to more accurately reflect the percentage of renewable energy penetration in the State. It also establishes a RPS and targets for gas utility companies that mirrors those set for electric utility companies.

With this proposed amendment to our process of analysis in effect, the state can stop the proposed sale of LNG and that would be a great thing for the following reasons. LNG is not a clean gas as it produces methane which is one of the most harmful greenhouse gases. It isn't as cheap as advertised especially because of the infrastructure required to deliver what will probably be a very short term solution to our energy needs at best. Worst of all, LNG is produced through fracking which causes environmental destruction. We don't want Hawaii Gas to sell this product and their plan to power consumers in Hawaii. See link for more information: <http://www.civilbeat.org/2018/03/the-dirt-on-clean-natural-gas/>

We need to fix the critical flaws in our RPS that would prevent us from ensuring a full and fair transition to clean energy. We must not undermine our own efforts to achieve our 100% renewable energy goal.

Mahalo for the opportunity to testify in **strong support** of this very important bill!

Janet Graham



To: The Senate Committee on Transportation and Energy
and
The Senate Committee on Commerce, Consumer Protection and Health
From: Sherry Pollack, 350Hawaii.org
Date: Wednesday, 3/21/18

In strong support of HB 1801 HD1

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and members of the TRE and CPH committees,

I am Vice President of the Hawaii chapter of 350.org, the largest international organization dedicated to fighting climate change. On behalf of our members and supporters, 350Hawaii.org **strongly supports** HB 1801 HD1, but with a proposed amendment. We respectfully request that the Committees amend HB 1801 HD1 under §269-A Renewable portfolio standards for gas utility companies to read:

~~“(b)Each gas utility company that sells gas for grid-connected electrical energy generation by regulated utility operations in the State shall establish a renewable energy portfolio standard of one hundred per cent by December 31, 2045.”~~

Climate scientists agree we have a much better future in store for us if we act quickly and with earnest to make significant changes, and it all comes down to reducing greenhouse gas emissions. HB1801HD1 helps Hawaii do a better job of that by correcting flaws in the original renewable portfolio standard (RPS), ensuring 100% renewable truly means 100% renewable, in addition to extending the RPS to gas utilities.

Liquefied Natural Gas (LNG) has no place in Hawaii's clean energy future and makes our dependence on imported, dirty fossil fuels worse, not better. Using less (or none) of it would also send a message to suppliers that it's high time they get out of that destructive business and focus on clean energy instead.

LNG IS NOT CLEAN. Burning it does emit less CO2 than coal and oil. But LNG is 85 to 95% methane[1], a global warming gas 84 times as potent as CO2 over a 20-year period[2]. About 25% of the manmade global warming we're experiencing today is caused by methane emissions. And the largest source of industrial methane emissions is the oil and gas industry[2].

No matter where it is mined, LNG hurts the environment right here by worsening climate change. It leaks at drilling sites, along pipelines, at compression stations, at storage facilities and throughout the

networks of piping that carry it to homes[3]. Washington, D.C. alone has 5,893 natural gas leaks[4]. And transporting LNG to Hawaii burns fuel, producing even more greenhouse gases.

LNG is not cost-effective over the long term. The price of renewables like wind and solar, and battery storage, continues to plummet. Hawaii Gas is building infrastructure to increase LNG imports that would cost \$200 million by their own estimate[5], and they've already applied for a rate hike. We should not spend another penny on fossil fuel infrastructure. The long-term cost of delaying full use of renewable energy (i.e., more rapid climate change) is already clear in our state.

LNG is not needed to diversify Hawaii's fuel supply. We have wind, solar, geothermal, hydroelectric, deep sea water chilling, and biomass, with ocean thermal and wave energy on the way. All we need are batteries and resolve. It is important to note that the RPS cites 2045 as our target date to achieve our renewable portfolio standard... more than a quarter of a century from today. With today's exponential rate of technological changes and advances, it's not even possible for us to fathom today what additional renewable energy technologies will be developed and available (if we promote and provide incentive) by that time. And along the way, because LNG is not renewable, it should just fade away as we reach for our renewable energy goal.

LNG is not safe. Fracking to obtain it contributes to all manner of calamities from breast cancer to flammable tap water to earthquakes[6]. It's no wonder that Vermont, New York, Maryland, several European countries and Hawaii County have all banned the practice.

Any effort and expense to use LNG here is far better put toward reaching our renewables goal. LNG imports are a direct obstacle to that goal.

It is ironic that those that would have us continue our dependency on climate destroying fossil fuels have used the argument of Hawaii's need for "energy resiliency in the case of man-made and natural disasters" to justify the gas utility's exemption from the RPS. When in fact, scientists agree it is the greenhouse gases we are producing, primarily from our burning of fossil fuels, that is resulting in an increase in these extreme weather events and natural disasters. This already obvious "climate weirding" we are all becoming familiar with is, in truth, more justification for our urgent transition to renewable non-climate disrupting energy and **not** more of what got us into this mess in the first place.

It is misguided for Hawaii to invest in more fossil fuel infrastructure and projects that ultimately contribute to our own demise. With our suggested amendment included, HB1801 HD1 can better correct a serious flaw in our renewable portfolio standard, putting our gas utilities in sync with electric utilities in meeting our renewable energy goals.

A pretty smart guy, the late Stephen Hawking, said last year "Climate change is one of the great dangers we face, and it's one we can prevent. Right now we only have one planet, and we need to work together to protect it."

Please support HB1801 HD1.

Thank you for the opportunity to testify.

Sherry Pollack
350Hawaii.org

- [1] https://energy.gov/sites/prod/files/2013/04/f0/LNG_primerupd.pdf
- [2] <https://www.edf.org/methane-other-important-greenhouse-gas>
- [3] <https://fivethirtyeight.com/features/methane-is-leaking-all-over-the-place/>
- [4] <http://pubs.acs.org/doi/full/10.1021/es404474x>
- [5] http://www.hawaiigas.com/media/1301/hawaii-gas_report_the-facts-about-lng-for-hawaii.pdf
- [6] <https://www.pbs.org/newshour/science/earthquakes-triggered-by-fracking>

HB-1801-HD-1

Submitted on: 3/17/2018 3:00:25 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Joseph Kohn MD	Testifying for We Are One, Inc. - www.WeAreOne.cc - WAO	Support	No

Comments:

Strongly Support

There is no rational reason to pollute our own environment or destroy ecosystems.

www.WeAreOne.cc



AMERICANS FOR DEMOCRATIC ACTION

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Karin Gill, Secretary	Chuck Huxel	Doug Pyle		

March 18 , 2018

TO: Honorable Chairs Inouye & Baker and Members of the TRE & CPH Committees

RE: HB1801 HD 1 Relating to Renewable Energy

Support for hearing on March 21

Americans for Democratic Action is an organization founded in the 1950s by leading supporters of the New Deal and led by Patsy Mink in the 1970s. We are devoted to the promotion of progressive public policies.

We support HB1801 HD1 as it would modify the definition of “renewable portfolio standard (RPS)” for electric utility companies to be based on ‘generation’ instead of ‘sales’ in order to more accurately reflect the percentage of renewable energy penetration in the State. It also establishes a renewable portfolio standard for gas utility companies of 100% by December 31, 2045, that mirrors that set for electric utility companies. Thus it would rectify the overestimation of the amount of renewable energy serving Hawaii’s electric utility customers and also holds the gas utility to a higher standard that mirrors the electric utility’s standard that commits to increase their reliance on renewable energy.

Thank you for your favorable consideration.

Sincerely,

John Bickel
President



2801-N2 La-I Road
Honolulu, HI 96816
March 18, 2018

Re: Testimony on HB1801

Dear Ladies and Gentlemen:

I am a long time Honolulu resident, very active internationally for the past decade on matters of climate change mitigation and adaptation, participating in the annual UN climate negotiations, or Conference of Parties. I am best known for producing a dual-purpose press conference/TV program known as Climate Matters from these meetings, engaging experts in climate science and other relevant fields. (<https://goo.gl/sZQec5>)

The world is at present on a very drastic climate trajectory. To say that things are much worse than is projected by mainstream media (even before the present denialist presidential administration took office) is an understatement. Climate change has been underplayed for decades. This is mostly due to the collective political reticence to deal with the disruption to 'business as usual' that a more accurate, honest narrative would necessitate. We continually opt for 'making money' instead of protecting current and future generations from environmental destruction. We defer to business lobbyists who may or may not pay lip-service to sustainability, but in fact are aiming at short term profits.

The effort to improve HB1801, to make the accounting of the percentage of Hawaii's energy generation mix more accurate, is of course welcome. I am in strong support of the bill in that it would mean a more aggressive and honest assessment of our progress toward the legislative mandate to realize 100% renewable energy by 2045.

I also very strongly support the current bill's effort to NOT commit Hawaii to further development of 'natural gas' as a bridge fuel. So-called 'natural gas' is in fact methane, an extremely powerful climatically active greenhouse gas. It is leaked into the atmosphere at many points in its production, processing and delivery. And the current methods by which it is produced (fracking) are a travesty for the health of neighboring communities.

As a small, remote island state, Hawaii is more vulnerable to climate change than any other state in America. We should be setting an aggressive legislative example for the rest of America and for the world. And we should not be creating the expensive infrastructure for methane as a so-called 'bridge fuel' since that would virtually assure that we do not meet our legal mandate for 100% renewable energy by 2045.

In conclusion, I urge you not only to pass HB1801, but also to strengthen the bill further by moving the target date in from 2045 to 2035 or even 2030 if you really want to exemplify both wisdom and courage in the face of aggressively accelerating climate disruption.

Sincerely,

A handwritten signature in black ink that reads "Stuart Scott". The signature is written in a cursive, flowing style.

Stuart Scott



Hawai`i Interfaith Power and Light

A religious response to global warming



**To: The Senate Committees on Transportation & Energy (TRE) and
Commerce, Consumer Protection, & Health (CPH)**
From: Hawaii Interfaith Power & Light (HIPL)

Re: Strong Support for HB1801 HD1, Relating to Renewable Energy.

Aloha e Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and Members of the Committees on Transportation & Energy (TRE) and Commerce, Consumer Protection, & Health (CPH):

My name is Travis Idol. I am President of Hawaii Interfaith Power & Light (HIPL), a local non-profit working with people and communities of faith to respond to the moral and practical challenges of climate change. HIPL's interfaith community affirms and promotes responsible policy and effective action on energy and climate change. On behalf of HIPL, thank you for this opportunity to submit **Testimony in Strong Support of HB1801 HD1** for the following reasons:

(1) Hawaii has committed by law to reduce reliance on fossil fuels in both the energy and transportation sectors, to consider levels and effects of greenhouse gas emissions, and to transition away from imported fuels and toward renewable local resources that provide secure and affordable energy. Please support the inclusion of natural gas under the purview of our ambitious but achievable renewable portfolio standard.

(2) Transitioning Hawaii's energy sector to renewable energy is strengthening the state's economy, environment, and security. Hawaii's transition to clean energy absolutely must include gas utilities! Please, ensure that Hawaii's renewable portfolio standards are based on energy generated rather than energy sold, and please ensure that these standards apply to gas utilities.

(3) Energy security and affordability will decrease while social, economic, and environmental costs increase until our energy systems are fossil free. Note that LNG is a methane-based fossil fuel dozens of times more dangerous as a greenhouse gas than carbon dioxide. *With a sense of urgency* for responsible stewardship of our Island Home, we trust in your leadership to transition ALL Hawaii energy utilities to 100% clean, renewable energy without a costly detour through LNG. Thank you.

Aloha no,

Travis Idol, President

hipl@hipl.org

HIPL embraces the following goals:

- *raise awareness of the deeply spiritual nature of energy and climate challenges;*
- *advocate energy policies that promote conservation, efficiency, and renewables;*
- *provide inspiration, resources, leadership, and education for effective community action.*



Hawai`i Interfaith Power and Light

A religious response to global warming



**To: The Senate Committees on Transportation & Energy (TRE) and
Commerce, Consumer Protection, & Health (CPH)**
From: Hawaii Interfaith Power & Light (HIPL)
Date: Wednesday, March 21, 2018
Time: 1:30 pm
Place: Conference Room 225, State Capitol, 415 South Beretania Street

Re: Strong Support for HB1801 HD1, Relating to Renewable Energy.

Aloha e Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and Members of the Committees on Transportation & Energy (TRE) and Commerce, Consumer Protection, & Health (CPH):

My name is Steve Lohse, I'm an environmental scientist and Legislative Liaison for Hawaii Interfaith Power & Light (HIPL). HIPL's interfaith community affirms and promotes responsible policy and effective action on energy and climate change. On behalf of HIPL, thank you for this opportunity to submit **Testimony in Strong Support of HB1801 HD1** for the following reasons:

(1) Hawaii commits by law to reduce reliance on fossil fuels, to consider levels and effects of greenhouse gas emissions, and to transition away from imported fuels and toward renewable local resources that provide secure and affordable energy. Please, do everything in your power at every opportunity to establish 100% clean renewable energy for Hawaii without delay.

(2) Transitioning Hawaii's energy sector to renewable energy is strengthening the state's economy, environment, and security. Hawaii's transition to clean energy absolutely must include gas utilities! Please, ensure that Hawaii's renewable portfolio standards are based on energy generated rather than energy sold, and please ensure that these standards apply to gas utilities.

(3) We cannot achieve sustainable energy security and affordability until our energy systems are fossil free, including gas utilities. LNG is a methane fossil fuel dozens of times more dangerous as a greenhouse gas than carbon dioxide. *With a sense of urgency* for responsible stewardship of our Island Home, we trust in your leadership to transition ALL Hawaii energy utilities to 100% clean, renewable energy without a costly gas-utility detour through LNG. Thank you.

Aloha no,

Hawaii Interfaith Power & Light (HIPL)

Steve Lohse, HIPL Legislative Liaison, 808-499-5406, lohse@hawaii.edu

HIPL embraces the following goals:

- *raise awareness of the deeply spiritual nature of energy and climate challenges;*
- *advocate energy policies that promote conservation, efficiency, and renewables;*
- *provide inspiration, resources, leadership, and education for effective community action.*

HB-1801-HD-1

Submitted on: 3/19/2018 9:48:04 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
David Mulinix	Testifying for Our Revolution Hawaii	Support	No

Comments:

Aloha Committee, I am writing in support of HB1801 that establishes renewable targets for gas utility companies that mirrors those set for electric utility companies. Because of the recent dramatic increase in Climate Change, we as a state need to be implementing fossil fuel alternatives now. The effects of Climate Change are already upon us. South Pacific Islands are already planning for the permanent evacuation of their traditional island homes, and ancient Alaskan Native villages are already falling into the sea because of the melting permafrost due to Climate Change. If the next generation is to survive we must act now. We can no longer afford to delay to switch from a fossil fuel based economy to a sustainable energy based economy. Please vote for and pass HB1801.

Malama Pono, Dave Mulinix

47-185-A Hui Akepa Place

Kaneohe, Hawaii 96744

Testimony to the Senate Committee on Transportation and Energy and Senate Committee on Commerce, Consumer Protection, and Health

Wednesday, March 21, 2018 1:30 p.m.
Conference Room 225, State Capitol
RE: House Bill 1801 HD 1

Chair Inouye, Vice Chair Espero and Members of the Transportation and Energy Committee
Chair Baker, Vice Chair Tokuda, and Members of the Commerce, Consumer Protection, and Health Committee:

Marriot Hawaii **Opposes** HB1801 HD1 which imposes and RPS on grid-connected electrical generation by regulated gas utility.

On behalf of our 19 managed Marriott properties in the Hawaiian Islands, the largest hospitality organization in the state, we respectfully oppose House Bill 1801, H.D. 1, which mandates a 100-percent renewable energy portfolio by December 31, 2045, on all gas sold for grid-connected electrical energy generation.

Marriott supports initiatives for a more sustainable future; however, we see the potential for unintended consequences with the language contained in House Bill 1801, H.D. 1. We foresee the very strict regulation of private industry to comply with another addition to the existing renewable standard portfolio timeline. This one will have a negative impact on our hotels that are currently using, or are in the process of installing, methods of generation such as combined heat and power (CHP) units.

CHP units are supported by the federal government for their efficiency and the role they play in reducing emissions and lowering costs. Additionally, with regard to the matter of energy resiliency in the case of man-made or natural disasters, redundancy and power supply with diverse fuel and diverse generation technology are becoming increasingly important. We believe this bill will not only affect private consumer choice, but due to the lack and high cost of gas, will hurt the entities that are using or planning to use cogeneration as a means of improving efficiency, increasing reliability, diversifying energy options, and lowering costs.

Eric Au

March 20, 2018

To: The Committees on Transportation and Energy Consumer Protection and Health

Re: House Bill 1801, H.D. 1: Relating to Renewable Energy

Chair Inouye, Chair Baker, and members of the Committees:

On behalf of The Westin Princeville Ocean Resort Villas, I respectfully oppose House Bill 1801, H.D. 1, which mandates a 100-percent renewable energy portfolio by December 31, 2045, on all gas sold for grid-connected electrical energy generation.

We at The Westin Princeville Ocean Resort Villas supports initiatives for a more sustainable future; however, we see the potential for unintended consequences with the language contained in House Bill 1801, H.D. 1. We foresee the very strict regulation of private industry to comply with another addition to the existing renewable standard portfolio timeline. This one will have a negative impact on large facilities such as our hotels that are currently using, or are in the process of installing, methods of generation such as combined heat and power (CHP) units.

CHP units are supported by the federal government for their efficiency and the role they play in reducing emissions and lowering costs. Additionally, with regard to the matter of energy resiliency in the case of man-made or natural disasters, redundancy and power supply with diverse fuel and diverse generation technology are becoming increasingly important. We believe this bill will not only affect private consumer choice, but due to the lack and high cost of gas, will hurt the entities that are using or planning to use cogeneration as a means of improving efficiency, increasing reliability, diversifying energy options, and lowering costs.

Thank you for the opportunity to offer this testimony.

Sincerely,

Denise Wardlow
General Manager
The Westin Princeville Ocean Resort Villas



HAWAII TEAMSTERS AND ALLIED WORKERS, LOCAL 996

Affiliated with the International Brotherhood of Teamsters

1817 Hart Street
Honolulu, Hawaii 96819-3205

Telephone: (808) 847-6633
Fax: (808) 842-4575

Testimony To The Senate Committee On Transportation And Energy, And The Senate Committee On Commerce, Consumer Protection, and Health

Wednesday, March 21, 2018
1:30pm, Conference Room 225
Hawaii State Capitol Building
415 South Beretania Street

RE: House Bill 1801 HD1

Chair Inouye, Vice Chair Espero and Members of the Committee on Transportation and Energy:

Chair Baker, Vice Chair Tokuda and Members of the Committee on Commerce, Consumer Protection, and Health:

The Hawaii Teamsters and Allied Workers, Local 996 stands opposed to HB 1801 HD1.

HB 1801 HD1 is another proposal that would limit choices for our members and other consumers.

Gas based technologies have proven to be a reliable resilient power over many years unlike renewable energy such as wind and solar which is in infancy.

The ability of consumers to choose between technologies for non-utility power generation while owning systems that are grid-connected under standby and other related tariffs seems to go materially beyond the original intent of the Hawaii RPS and will adversely impact the ability to grow distributed generation in the State.

The proposal regarding the gas utility incorporating renewable gas energy into a gas utility business as stated by Hawaii Gas is a function of availability, cost and reliability.

The utility should not be forced to invest in technology that comes with a hefty cost and lacks benefits for the consumer.

Thank you for the opportunity to testify on HB 1801 HD1.

Wayne K. S. Kaululaau
Political Coordinator
Hawaii Teamsters and Allied Workers, Local 996



SIERRA CLUB OF HAWAII
MĀLAMA I KA HONUA. *Cherish the Earth.*

SENATE COMMITTEE ON TRANSPORTATION AND ENERGY

SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, & HEALTH

Wednesday, March 21, 2018 1:30PM Conference Room 225

In STRONG SUPPORT of HB 1801 HD1 Relating to renewable energy

On behalf of our 20,000 members and supporters, the Sierra Club of Hawai'i, a member of the Common Good Coalition, **strongly supports HB 1801 HD1**, which seeks to rectify the overestimation of the amount of renewable energy serving Hawai'i's electric utility customers and also holds the gas utility to a higher standard that mirrors the electric utility's standard that commits to increase their reliance on renewable energy.

Hawai'i Revised Statutes section 269-92 (HRS 269-92) mandates a 100% renewable energy portfolio standard by year's end 2045. This means that *the State must transition away from imported fuels and intend toward renewable sources, preferably local, to provide a source of secure, local energy*. It is important that there is no overestimation in the delivery of this goal and that there are accurate measures in place to achieve it. **HB 1801 HD1 ensures this success.**

The gas utility should not have a lower standard than the electric utility. This bill enables a fair playing field in the transition to a renewable energy based State. Furthermore, not all gas is clean and renewable, which the gas utility should be held accountable. In fact, liquified natural gas (LNG), one of the gas utilities primary sources of natural gas sold to local customers, is mostly composed of methane^{1,2}. Methane is one of the most potent and toxic gases emitted into the atmosphere, almost 30 times as strong as carbon dioxide³. LNG will be the biggest source

¹<http://www.hawaiiigas.com/clean-energy/liquefied-natural-gas/>

² <https://www.pgworks.com/uploads/pdfs/LNGSafetyData.pdf>

³ <https://www.sciencedaily.com/releases/2014/03/140327111724.htm>

of carbon emission growth for the world's top oil and gas companies by 2025⁴. It is a simple fact that *LNG should not be a primary source of energy for the State*. In the face of climate change, methane is one of the top competitors, and needs to be accounted for when under the facade of natural gas. The support of natural gas continues our reliance on imported energy, ironically goes against the State's energy goals by emitting the most intense greenhouse gas, and distracts us from the truly renewable sources of energy necessary to combat climate change. The initial costs of cheap, yet dirty, natural gas is only a fraction of the climate change mitigation efforts the State will have to compensate for. **The investments in fossil fuels stops now**, we must transition to truly clean sources of energy. The gas utilities should be well aligned in their standards and commitments to effectively transition to 100% by 2045.

Just this year, an LNG leaking incident in Louisiana led natural gas company Cheniere Energy to shut down multiple tanks⁵. Multiple cracks in the double walled storage tanks ranged from 1 to 6 ft in length, allowing contaminants into the nearby drainage ditch and watershed. We cannot allow accidents like this to impact fragile ecosystems here in Hawai'i, therefore changes in the way our State defines clean and renewable energy must begin today.

We strongly urge the Committees to pass this measure, which will ultimately close the gaps and improve the coordination between State and utilities to ensure a 100% renewable State by 2045.

Thank you for the opportunity to testify in **strong support of HB 1801 HD1**.

⁴<https://www.reuters.com/article/lng-emissions/lng-growth-to-propel-oil-and-gas-industrys-carbon-emissions-woodmac-idUSL5N1LZ4K9>

⁵ <https://www.eenews.net/stories/1060073537>

HB-1801-HD-1

Submitted on: 3/16/2018 7:55:58 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Patricia Blair	Individual	Support	No

Comments:

HB-1801-HD-1

Submitted on: 3/16/2018 6:24:24 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Randy Ching	Individual	Support	No

Comments:

Chairs Inouye and Baker, Vice Chairs Espero and Tokuda and members of the committees,

Please pass HB1801 HD1. Natural gas is a fossil fuel and we should be decreasing our use of fossil fuels. Liquefied natural gas, which is mostly methane, releases a lot of methane in the mining of natural gas and its processing. We need to encourage solar, wind, ocean and biofuel energy. Also, we should be looking at battery storage, not LNG.

Thank you for the opportunity to testify.

Randy Ching / Honolulu

HB-1801-HD-1

Submitted on: 3/16/2018 8:51:24 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Nancy Davlantes	Individual	Support	No

Comments:

HB-1801-HD-1

Submitted on: 3/17/2018 3:46:00 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Barbara L. George	Individual	Support	No

Comments:

SUPPORT!!!

HB-1801-HD-1

Submitted on: 3/17/2018 12:33:46 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Michele Nihipali	Individual	Support	No

Comments:

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and members of the Committees,

My name is Michele Nihipali and I live in Hauula. I am in **STRONG SUPPORT** of this important bill that moves Hawai'i toward our goal of 100% renewable energy by 2045. We have a long way to go and many things to do before we reach this admirable and ambitious goal, which showcases to the world our commitment to combat climate change and preserve our beautiful planet for generations to come. This measure is one of several that will contribute to these important efforts. We need to establish renewable portfolio standards. I urge the committees to pass this bill!

Mahalo for the opportunity to testify today.

Michele Nihipali

54-074 A Kam Hwy.

Hauula, HI 96717

HB-1801-HD-1

Submitted on: 3/17/2018 4:18:24 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Benton Kealii Pang, Ph.D.	Individual	Support	No

Comments:

HB-1801-HD-1

Submitted on: 3/18/2018 12:56:42 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Janet Pappas	Individual	Support	No

Comments:

Dear Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and members of the TRE and CPH committees,

I strongly support HB1801HD1.

Below for your information is a summary position statement from the Union of Concerned Scientists (UCS) on the extraction and use of natural gas (LNG), a fossil fuel. The complete evidence-based paper can be found at: https://www.ucsusa.org/sites/default/files/legacy/assets/documents/clean_energy/UCS-Position-on-Natural-Gas-Extraction-and-Use-for-Electricity-and-Transportation-in-the-United-States.pdf). Remembering how we had to fend off NextEra due to its proclivity for using LNG, it seems the same scenario will need to be repeated with Hawaii Gas.

With both Hawaii and the world (except for the U.S.) attempting to reach renewable energy goals, it is imperative to incorporate a scientific perspective when looking for clean, sustainable energy sources and solutions for the immediate future.

Please consider UCS's expert opinion when making decisions for the state of Hawaii's energy mix.

* * * * *

UCS Position on Natural Gas Extraction and Use

for Electricity and Transportation in the United States

Summary Position Statement: To avoid the worst consequences of climate change, the United States must transition to low- and zero-carbon energy sources over the next 40 years. Natural gas is a fossil fuel whose emissions contribute to global warming, making it a far less attractive climate solution than lower- and zero-carbon alternatives such as energy efficiency and renewable energy.

Furthermore, new research suggests that methane leakage during the extraction and distribution of natural gas may be undermining the potential to reduce global warming emissions by using natural gas in place of higher-carbon fossil fuels such as coal and

oil. And new horizontal drilling and hydraulic fracturing (or “fracking”) techniques that have allowed domestic gas and oil production to expand rapidly over the past decade have raised new questions about the impacts that natural gas extraction and use will have on climate change, public health and safety, land and water resources, and people. This expansion is currently outpacing our capacity to understand and manage the attendant risks.

During our nation’s transition to a low-carbon energy future, natural gas can play an important but limited role in the electricity and transportation sectors if policies sufficient to minimize emissions and protect communities and public health are put in place.

Specifically, the Union of Concerned Scientists (UCS) recommends that:

- Policy makers at all levels of government should prioritize the use of cleaner and safer strategies such as renewable energy and energy efficiency in all sectors of the economy
- Stronger federal and state regulations are needed to reduce global warming emissions from the extraction, distribution, and use of natural gas
- Better information and stronger regulations are needed to understand and reduce the potential environmental and public health risks associated with fracking
- A local or statewide moratorium or ban on fracking may be appropriate in cases where there is a substantial risk of significant harm to the environment or public health, or where reliable scientific data on such risks are lacking

For UCS' complete statement, please go to:

<https://www.ucsus.org/sites/default/files/legacy/assets/documents/cleanenergy/UCS-Position-on-Natural-Gas-Extraction-and-Use-for-Electricity-and-Transportation-in-the-United-States.pdf>.

* * * * *

Thank you for supporting HB1801HD1. The keiki of Hawaii will thank you for your foresight.

Sincerely,

Jan Pappas
98-1287 Akaaka St.
Aiea, Hawaii 96701

From: [Janet Pappas](#)
To: [WAM Testimony](#); [TRE Testimony](#); [CPH Testimony](#)
Cc: davidsher@juno.com; [Brodie Lockard](#)
Subject: Support for HB1801HD1 - Include gas utilities in the Hawaii State renewable portfolio standard
Date: Monday, March 12, 2018 3:33:40 PM

Dear WAM, TRE and CPH committees,

I support HB1801HD1.

Below for your information is a summary position statement from the Union of Concerned Scientists (UCS) on the extraction and use of natural gas (LNG), a fossil fuel (for the complete evidence-based paper, go to https://www.ucsusa.org/sites/default/files/legacy/assets/documents/clean_energy/UCS-Position-on-Natural-Gas-Extraction-and-Use-for-Electricity-and-Transportation-in-the-United-States.pdf).

Remembering how we had to fend off NextEra due to its proclivity for using LNG, it seems the same scenario may need to be repeated with Hawaii Gas.

With both Hawaii and the world (save the U.S.) attempting to reach renewable energy goals, it is imperative to incorporate a scientific perspective when looking for clean, sustainable energy sources and solutions in the immediate future.

Please consider UCS's expert opinion when making decisions for the state of Hawaii's energy mix.

* * * * *

UCS Position on Natural Gas Extraction and Use for Electricity and Transportation in the United States

(for UCS' complete statement, please go

to: <https://www.ucsusa.org/sites/default/files/legacy/assets/documents/cleanenergy/UCS-Position-on-Natural-Gas-Extraction-and-Use-for-Electricity-and-Transportation-in-the-United-States.pdf>)

Summary Position Statement: To avoid the worst consequences of climate change, the United States must transition to low- and zero-carbon energy sources over the next 40 years. Natural gas is a fossil fuel whose emissions contribute to global warming, making it a far less attractive climate solution than lower- and zero-carbon alternatives such as energy efficiency and renewable energy.

Furthermore, new research suggests that methane leakage during the extraction and distribution of natural gas may be undermining the potential to reduce global warming emissions by using natural gas in place of higher-carbon fossil fuels such as coal and oil. And new horizontal drilling and hydraulic fracturing (or “fracking”) techniques that have allowed domestic gas and oil production to expand rapidly over the past decade have raised new questions about the impacts that natural gas extraction and use will have on climate change, public health and safety, land and water resources, and people. This expansion is currently outpacing our capacity to understand and manage the attendant risks.

During our nation’s transition to a low-carbon energy future, natural gas can play an important but limited role in the electricity and transportation sectors if policies sufficient to minimize emissions and protect communities and public health are put in place.

Specifically, the Union of Concerned Scientists (UCS) recommends that:

- Policy makers at all levels of government should prioritize the use of cleaner and safer strategies such as renewable energy and energy efficiency in all sectors of the economy
- Stronger federal and state regulations are needed to reduce global warming emissions from the

extraction, distribution, and use of natural gas

- Better information and stronger regulations are needed to understand and reduce the potential environmental and public health risks associated with fracking
- A local or statewide moratorium or ban on fracking may be appropriate in cases where there is a substantial risk of significant harm to the environment or public health, or where reliable scientific data on such risks are lacking

* * * * *

Thank you for supporting HB1801HD1. The keiki of Hawaii will thank you for your foresight.

Sincerely,

Jan Pappas
98-1287 Akaaka St.
Aiea, Hawaii 96701

HB-1801-HD-1

Submitted on: 3/18/2018 1:55:24 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jun Shin	Individual	Support	No

Comments:

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and members of the Committees,

My name is Jun Shin, I am a Freshman at the University of Manoa, a board member at-large for Young Progressives Demanding Action - Hawaii and I live in House District 26. I am in **STRONG SUPPORT** of HB1801 HD1 that moves Hawai'i toward our goal of 100% renewable energy by 2045. We have a long way to go and many things to do before we reach this admirable and ambitious goal, which showcases to the world our commitment to combat climate change and preserve our beautiful planet for generations to come. This measure is one of several that will contribute to these important efforts. I urge the committees to pass this bill!

Mahalo for the opportunity to testify today.

Jun

Board Member At- Large

Young Progressives Demanding Action - Hawaii

808-255-6663

HB-1801-HD-1

Submitted on: 3/18/2018 7:05:13 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Deana Shelby	Individual	Support	No

Comments:

I strongly support of **HB1801 HD1**.

We need to fix the critical flaws in our RPS that would prevent us from transitioning to clean energy. We must not undermine efforts to achieve 100% renewable energy goals.

Mahalo for the opportunity to testify.

HB-1801-HD-1

Submitted on: 3/18/2018 8:08:34 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Kelly King	Individual	Support	No

Comments:

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and Members of the Committees,

I strongly support **HB1801 HD1** that amends the renewable portfolio standard (RPS) to more accurately reflect the percentage of renewable energy penetration in the State. This bill would also establish targets for gas utility companies that mirror those set for electric utility companies. The latter is critical in order to reach Hawaii's goals without contributing to the greenwashing that is often a consequence of undue influence on our political system by implying that LNG is clean and renewable. It is not.

We need to fix the critical flaws in our RPS that would prevent us from ensuring a full and fair transition to clean energy. We must not outsource the pollution that is truly part of the life cycle analysis of LNG fracking or we will undermine the sincere efforts being made to achieve our 100% renewable energy goal.

Mahalo for the opportunity to testify in **strong support** of this very important bill!

HB-1801-HD-1

Submitted on: 3/18/2018 9:05:50 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jonathan Boyne	Individual	Support	No

Comments:

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and Members of the Committees,

I am writing in strong support of **HB1801 HD1**. This bill would amend the renewable portfolio standard (RPS) to more accurately reflect the percentage of renewable energy penetration in the State. It also establishes a RPS and targets for gas utility companies that mirrors those set for electric utility companies.

We need to fix the critical flaws in our RPS that would prevent us from ensuring a full and fair transition to clean energy. We must not undermine our own efforts to achieve our 100% renewable energy goal.

Mahalo for the opportunity to testify in **strong support** of this very important bill!

HB-1801-HD-1

Submitted on: 3/18/2018 9:32:12 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Martha E. Martin	Individual	Support	No

Comments:

Aloha Committee Chairs and Members,

Please support this bill to strengthen the renewable portfolio standard.

Making the shift to clean energy will help Hawaii.

Mahalo

HB-1801-HD-1

Submitted on: 3/18/2018 11:54:37 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Lois Crozer	Individual	Support	No

Comments:

We need to ensure we achieve our 100% renewable energy goals.

HB-1801-HD-1

Submitted on: 3/18/2018 12:07:27 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Mary True	Individual	Support	No

Comments:

I strongly support House Bill 1801. Hawaii Gas is neither sustainable nor renewable. Supporting them is heading in the wrong direction. Mahalo.

HB-1801-HD-1

Submitted on: 3/18/2018 12:13:59 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Denise Boisvert	Individual	Support	No

Comments:

I strongly support HB1801. **The future is closer than we think**; this bill is needed to accurately meet the 100% renewable energy goal 2045 deadline.

Respectfully yours,

Denise Boisvert

Waikiki

HB-1801-HD-1

Submitted on: 3/18/2018 12:42:05 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

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

Comments:

HB-1801-HD-1

Submitted on: 3/18/2018 12:45:27 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Taurie Kinoshita	Individual	Support	No

Comments:

I am in strong support of this bill. We need to fix the critical flaws in our RPS that would prevent us from ensuring a full and fair transition to clean energy. We must not undermine our own efforts to achieve our 100% renewable energy goal. Thank you for your consideration.

HB-1801-HD-1

Submitted on: 3/18/2018 1:01:53 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
John Nix	Individual	Support	No

Comments:

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and Members of the Committees,

I am writing in strong support of **HB1801 HD1**. This bill would amend the renewable portfolio standard (RPS) to more accurately reflect the percentage of renewable energy penetration in the State. It also establishes a RPS and targets for gas utility companies that mirrors those set for electric utility companies.

We need to fix the critical flaws in our RPS that would prevent us from ensuring a full and fair transition to clean energy. We must not undermine our own efforts to achieve our 100% renewable energy goal.

Mahalo

HB-1801-HD-1

Submitted on: 3/18/2018 1:42:47 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Kim Jorgensen	Individual	Support	No

Comments:

I strongly support HB1801.

HB-1801-HD-1

Submitted on: 3/18/2018 1:45:55 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Carolynn Bell-Tuttle	Individual	Support	No

Comments:

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and Members of the Committees,

I am writing in strong support of **HB1801 HD1**. This bill would amend the renewable portfolio standard (RPS) to more accurately reflect the percentage of renewable energy penetration in the State. It also establishes a RPS and targets for gas utility companies that mirrors those set for electric utility companies.

We need to fix the critical flaws in our RPS that would prevent us from ensuring a full and fair transition to clean energy. We must not undermine our own efforts to achieve our 100% renewable energy goal.

Mahalo for the opportunity to testify in **strong support** of this very important bill!

Carolynn Bell-Tuttle

HB-1801-HD-1

Submitted on: 3/18/2018 2:43:58 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Sandra Fujita	Individual	Support	No

Comments:

HB-1801-HD-1

Submitted on: 3/18/2018 7:34:11 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
tlaloc tokuda	Individual	Support	No

Comments:

I belong to 350HI and we try to assist policy makers to create bills that promote renewables, keep fossil fuels in the ground and try to make State Funds join the divestment movement so we support the following:

Technological development and R&D in PV, Wind generation, battery storage and driving prices down so that wind and PV are competitive with coal without all the environmental, social, health, poverty externalities. So we should try and implement the United Nations' Global Goals. 7. Hawaii is well placed to use these and other (OTEC, Geothermal & market mechanisms to transition to a 100% renewable future.

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and Members of the Committees,

I am writing in strong support of **HB1801 HD1**. This bill would amend the renewable portfolio standard (RPS) to more accurately reflect the percentage of renewable energy penetration in the State. It also establishes a RPS and targets for gas utility companies that mirrors those set for electric utility companies.

We need to fix the critical flaws in our RPS that would prevent us from ensuring a full and fair transition to clean energy. We must not undermine our own efforts to achieve our 100% renewable energy goal.

Mahalo for the opportunity to testify in **strong support** of this very important bill!

HB-1801-HD-1

Submitted on: 3/18/2018 7:41:00 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Philipp LaHaela Walter	Individual	Support	No

Comments:

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and members of the Committees,

My name is Philipp LaHaela Walter and I live in Moiliili, Honolulu. I am in **STRONG SUPPORT** of this important bill that moves Hawai'i toward our goal of 100% renewable energy by 2045. We have a long way to go and many things to do before we reach this admirable and ambitious goal, which showcases to the world our commitment to combat climate change and preserve our beautiful planet for generations to come. This measure is one of several that will contribute to these important efforts. I urge the committees to pass this bill!

Mahalo for the opportunity to testify today.

HB-1801-HD-1

Submitted on: 3/18/2018 8:21:01 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
John Maurer	Individual	Support	No

Comments:

I strongly support HB 1801 HD1 to protect our planet. It is urgent that ALL utilities transition to 100% renewable energy as soon as possible. There is no "Planet B", so just say no to fracked LNG. Mahalo.

HB-1801-HD-1

Submitted on: 3/18/2018 8:24:22 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Glenn Metzler	Individual	Support	No

Comments:

HB-1801-HD-1

Submitted on: 3/18/2018 10:24:03 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Morgan Bonnet	Individual	Support	No

Comments:

HB-1801-HD-1

Submitted on: 3/18/2018 10:48:25 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Kathy Shimata	Individual	Support	No

Comments:

I am writing in strong support of **HB1801 HD1**.

LNG is a fossil fuel. This bill establishes a RPS and targets for gas utility companies that mirrors those set for electric utility companies.

We need to fix the critical flaws in our RPS that would prevent us from ensuring a full and fair transition to clean energy. We must not undermine our own efforts to achieve our 100% renewable energy goal.

Mahalo for the opportunity to testify in **strong support** of this very important bill!

HB-1801-HD-1

Submitted on: 3/18/2018 11:02:46 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Severine Busquet	Individual	Support	No

Comments:

Hi,

I am writing in strong support of **HB1801 HD1**. This bill would amend the renewable portfolio standard (RPS) to more accurately reflect the percentage of renewable energy penetration in the State. It also establishes a RPS and targets for gas utility companies that mirrors those set for electric utility companies.

We need to fix the critical flaws in our RPS that would prevent us from ensuring a full and fair transition to clean energy. We must not undermine our own efforts to achieve our 100% renewable energy goal.

Thanks for your attention

HB-1801-HD-1

Submitted on: 3/19/2018 12:03:07 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Gaye Chan	Individual	Support	No

Comments:

HB-1801-HD-1

Submitted on: 3/19/2018 4:01:25 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Shannon Rudolph	Individual	Support	No

Comments:

Support!

HB-1801-HD-1

Submitted on: 3/19/2018 6:10:15 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Carlton York	Individual	Support	No

Comments:

Strong support for this Bill , must move to renewable resources as there is no planet B to move to if Climate collapse occurs !

HB-1801-HD-1

Submitted on: 3/19/2018 7:06:38 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Mary Lacques	Individual	Support	No

Comments:

HB-1801-HD-1

Submitted on: 3/19/2018 8:03:59 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Eric Schrager	Individual	Support	No

Comments:

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and members of the TRE and CPH committees,

Natural Gas IS A FOSSIL FUEL!!! We must apply the same controls to it as we do to other fossil fuels and end this ridiculous, disingenuous pandering to the gas industry.

I am writing in **STRONG SUPPORT of HB 1801 HD1**. This bill would amend the renewable portfolio standard (RPS) to more accurately reflect the percentage of renewable energy penetration in the State. It also establishes a RPS and targets for gas utility companies that mirrors those set for electric utility companies.

We need to fix the critical flaws in our RPS that would prevent us from ensuring a full and fair transition to clean energy. We must not undermine our own efforts to achieve our 100% by 2045 renewable energy goal.

With Aloha,

Eric Schrager

HB-1801-HD-1

Submitted on: 3/19/2018 9:53:28 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Dana Jenkins	Individual	Support	No

Comments:

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and members of the TRE and CPH committees,

I am writing in **STRONG SUPPORT of HB 1801 HD1**. This bill would amend the renewable portfolio standard (RPS) to more accurately reflect the percentage of renewable energy penetration in the State. It also establishes a RPS and targets for gas utility companies that mirrors those set for electric utility companies.

We need to fix the critical flaws in our RPS that would prevent us from ensuring a full and fair transition to clean energy. We must not undermine our own efforts to achieve our 100% by 2045 renewable energy goal.

HB-1801-HD-1

Submitted on: 3/19/2018 10:18:57 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Kylie Cruz	Individual	Support	No

Comments:

I live in Sen. Ihara's district and strongly support this bill.

Kylie Wager Cruz

HB-1801-HD-1

Submitted on: 3/19/2018 10:19:01 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
christine trecker	Individual	Support	No

Comments:

HB1801 HD1 is an important step toward reaching the goal of 100% renewable energy by 2045. I strongly urge its passage.

Thank you.

Christine Trecker

HB-1801-HD-1

Submitted on: 3/19/2018 10:29:54 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

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

Comments:

HB-1801-HD-1

Submitted on: 3/19/2018 1:02:20 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Maja	Individual	Support	No

Comments:

HB-1801-HD-1

Submitted on: 3/19/2018 1:03:25 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Sarah Toole	Individual	Support	No

Comments:

My name is Sarah Toole, my address is 1128 Ala Napunani St. 96818, and I am a political science student at UH Manoa.

I support this bill.

HB-1801-HD-1

Submitted on: 3/19/2018 2:12:47 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
isabelle yao	Individual	Support	No

Comments:

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and members of the TRE and CPH committees,

I am writing in **STRONG SUPPORT of HB 1801 HD1**. This bill would amend the renewable portfolio standard (RPS) to more accurately reflect the percentage of renewable energy penetration in the State. It also establishes a RPS and targets for gas utility companies that mirrors those set for electric utility companies.

We need to fix the critical flaws in our RPS that would prevent us from ensuring a full and fair transition to clean energy. We must not undermine our own efforts to achieve our 100% by 2045 renewable energy goal.

Thank you for your attention to this matter.

Warmest regards,

Isabelle Yao

HB-1801-HD-1

Submitted on: 3/19/2018 3:37:13 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Cody Moniz	Individual	Support	No

Comments:

I am writing in STRONG SUPPORT of HB 1801 HD1. This bill would amend the renewable portfolio standard (RPS) to more accurately reflect the percentage of renewable energy penetration in the State. It also establishes a RPS and targets for gas utility companies that mirrors those set for electric utility companies.

We need to fix the critical flaws in our RPS that would prevent us from ensuring a full and fair transition to clean energy. We must not undermine our own efforts to achieve our 100% by 2045 renewable energy goal.

HB-1801-HD-1

Submitted on: 3/19/2018 3:40:33 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Mark Nokes	Individual	Support	No

Comments:

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and members of the Committees,

My name is Mark Nokes, Ph.D., and I live in the Diamond Head-Kapahulu neighborhood of Honolulu. I am in **STRONG SUPPORT HB1801 HD1.**

This is an important bill that helps advance Hawai'i toward our vital goal of 100% renewable energy by 2045. HB1801 is one of several measures that will contribute to this important effort.

We have yet many things to accomplish to reach this admirable and ambitious goal, but we are committed to attenuating the effects of climate change to the maximum extent possible, and to preserving our beautiful state and planet for generations to come.

I urge the committees to pass this bill!

Mahalo for your consideration.

HB-1801-HD-1

Submitted on: 3/19/2018 6:16:12 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Mark Wilson	Individual	Support	No

Comments:

Aloha, members of the TRE and CPH committee,

I have never before submitted testimony, but I feel so strongly about what climate change is already doing to our vulnerable island environment and what it will continue to do if unchecked that I am urging you to support HB 1801 HD1.

I understand that this bill would correct flaws in our current renewal portfolio standard (RPS) by extending the RPS to gas utilities. The use of fracked liquified natural gas appears to be counter-productive and would hinder rather than improve our chances of reaching our goal of 100% renewable energy by 2045.

Thank you for considering my testimony in support of this bill that is so crucial to the future of our island state.

Mark Wilson

HB-1801-HD-1

Submitted on: 3/19/2018 9:13:09 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Nanea Lo	Individual	Support	No

Comments:

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and Members of the Committees,

I am writing in strong support of **HB1801 HD1**. This bill would amend the renewable portfolio standard (RPS) to more accurately reflect the percentage of renewable energy penetration in the State. It also establishes a RPS and targets for gas utility companies that mirrors those set for electric utility companies.

We need to fix the critical flaws in our RPS that would prevent us from ensuring a full and fair transition to clean energy. We must not undermine our own efforts to achieve our 100% renewable energy goal.

Mahalo for the opportunity to testify in **strong support** of this very important bill!

HB-1801-HD-1

Submitted on: 3/20/2018 10:46:28 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Meredith Buck	Individual	Support	No

Comments:

My name is Meredith Buck from Kailua Kona, HI. I stand in strong support of bill HB1801 HD1. Mahalo.

HB1801 HD1

Energy; Utilities; Renewable Portfolio Standard

March 20 2018

Relating Renewable Energy

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and members of the TRE and CPH committees, my name is Maxim Poudrier-Tudan, and I am a student at the University of Hawai'i at Manoa, and I am in **STRONG SUPPORT** of **HB1801 HD1**.

Currently, our dependence on LNG is entirely outsourced, and most energy produced in our state comes from LNG. LNG is harmful to the environment, because it is a very dirty and wasteful form of energy, which requires tons and tons of water to be used for Fracking. Along with the environmental devastation that fracking leaves our lands, it releases CO2 into the air, and causes climate change to happen at an increasing rate. Climate change is happening all around us, and we have to stop it. LNG is expensive, and the dependence we have on the mainland will only continue to hurt us as gas prices go up and will leave our citizens in poverty when energy bills go up and gas prices become too high. The dependence we have on the mainland is taxing on our citizens, so we need renewable options NOW to ensure a cheaper, cleaner alternative for the people of Hawai'i.

This bill would amend the renewable portfolio standard (RPS), and this would help to more accurately reflect the percentage that renewable energy is used in the state. This bill also establishes a RPS and targets gas utility companies. We need to correct the flaws in our RPS which currently prevent ensuring renewable energy and a fair transition to clean energy. We must achieve our goals to 100% renewable energy by 2045 in order to ensure a sustainable future for our keiki, and for Hawai'i.

Mahalo for the opportunity to testify!

HB1801 HD1

Energy; Utilities; Renewable Portfolio Standard

March 21 2018

Relating Renewable Energy

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and members of the TRE and CPH committees, My name is Charessa Fryc and I am the Co-Chair of the Sierra Student Coalition at the University of Hawai'i at Manoa and the Chair for the Environmental Committee for the Young Progressives Demanding Action and I am in **STRONG SUPPORT** of **HB1801 HD1**.

As an Environmental Activist who wishes to see a more sustainable future for Hawai'i I am in **STRONG SUPPORT** of HB1801. Currently, our dependence on LNG is entirely outsourced, and most energy produced in our state comes from LNG. LNG is harmful to the environment, because it is a very dirty and wasteful form of energy, which requires tons and tons of water to be used for Fracking. Along with the environmental devastation that fracking leaves our lands, it releases CO2 into the air, and causes climate change to happen at an increasing rate. Climate change is happening all around us, and we have to stop it. LNG is expensive, and the dependence we have on the mainland will only continue to hurt us as gas prices go up and will leave our citizens in poverty when energy bills go up and gas prices become too high. The dependence we have on the mainland is taxing on our citizens, so we need renewable options NOW to ensure a cheaper, cleaner alternative for the people of Hawai'i.

This bill would amend the renewable portfolio standard (RPS), and this would help to more accurately reflect the percentage that renewable energy is used in the state. This bill also establishes a RPS and targets gas utility companies. We need to correct the flaws in our RPS which currently prevent ensuring renewable energy and a fair transition to clean energy. We must achieve our goals to 100% renewable energy by 2045 in order to ensure a sustainable future for our keiki, and for Hawai'i.

Mahalo for the opportunity to testify!

Charessa Fryc

HB-1801-HD-1

Submitted on: 3/20/2018 3:34:09 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Mark Hixon	Individual	Support	No

Comments:

Aloha Hawai'i Legislators,

I am writing in **STRONG SUPPORT of HB 1801**. This bill will amend the Renewable Portfolio Standard (RPS) to more accurately reflect the percentage of renewable energy penetration in the State. It also establishes a RPS and targets for gas utility companies that mirrors those set for electric utility companies.

Without this bill, there are critical flaws in our RPS that would prevent us from ensuring a full and fair transition to clean energy. We must not undermine our efforts to achieve our 100% by 2045 renewable energy goal.

Mahalo for the opportunity to testify in **strong support** of this very important bill: **HB 1801!**

Mark Hixon

Honolulu

HB-1801-HD-1

Submitted on: 3/20/2018 11:15:10 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
michele matsuo	Individual	Support	No

Comments:

Good Afternoon, Chair Inouye, Chair Baker, Vice Chair Espero, Vice Chair Tokuda and members of the Committees

Thank you for this opportunity to testify.

I am in strong support of HB1801.

Hawai'i needs to stop exporting precious funds out of state when we are fully capable of producing our own renewable clean energy here in Hawai'i.

Mahalo,

Michele Matsuo

HB-1801-HD-1

Submitted on: 3/20/2018 4:52:54 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Aaron Cates	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/20/2018 5:46:32 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Russell Winkelman	Individual	Oppose	No

Comments:

Trying to expand the HECO renewable guidelines to include the Gas Company is not practical or reasonable and would have a negative effect on the taxpayers.

HB-1801-HD-1

Submitted on: 3/20/2018 5:59:31 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Glen Takenouchi	Individual	Oppose	No

Comments:

It will lead to increased rates to the gas ratepayers for all gas provided products.

HB-1801-HD-1

Submitted on: 3/20/2018 6:19:02 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Debra Ota	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/20/2018 6:44:01 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Kevin Nishimura	Individual	Oppose	No

Comments:

I strongly oppose bills such as this one that will raise the cost of energy for Hawaii and have the potential to reduce our resilience during unfavorable times, such as natural disasters or attack. Please stop this bill! Aloha, Kevin Nishimura, Hawaii resident and concerned voter.

HB-1801-HD-1

Submitted on: 3/20/2018 7:22:30 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jocelyn Demirbag	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/20/2018 7:26:04 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Mustafa Demirbag	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/20/2018 7:44:45 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Nathan Koop	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/20/2018 7:54:48 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
heather koop	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/20/2018 7:55:58 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Aaron Kirk	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/20/2018 8:06:48 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Clifford	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/20/2018 8:30:59 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Grace Wilson	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/21/2018 12:57:20 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
D Gomez	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/21/2018 6:45:51 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Richard DeGarmo	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/21/2018 7:19:13 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
sara yoshida	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/21/2018 7:23:27 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Eva Braman	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/21/2018 7:31:42 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Wayne Daimaru	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/21/2018 7:37:07 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Colin Hashiro	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/21/2018 7:38:38 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Luz Gonsalves	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/21/2018 7:44:09 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Stephanie Iwasaki	Individual	Oppose	No

Comments:

This will lead to increase in rates for gas users.

HB-1801-HD-1

Submitted on: 3/21/2018 8:01:14 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Daryl Ranis	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/21/2018 8:03:52 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Lee mattos	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/21/2018 8:08:17 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Ryan Cantor	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/21/2018 8:11:26 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Neal McCartney	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/21/2018 8:11:46 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
dennis miyashiro	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/21/2018 8:12:02 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Nira Nishioka	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/21/2018 8:14:03 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
P. A.	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/21/2018 8:25:08 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Candice Edwards	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/21/2018 8:29:19 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Rayson Sakoda	Individual	Oppose	No

Comments:

HB-1801-HD-1

Submitted on: 3/21/2018 8:31:58 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Vernon Yamada	Individual	Oppose	No

Comments:

This bill will increase the gas rates for the customers. I oppose this bill

HB-1801-HD-1

Submitted on: 3/21/2018 8:36:56 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Russell Kapuniai	Individual	Oppose	No

Comments:

I do not support this bill. This bill will increase gas rates drastically for the customers.



HB-1801-HD-1

Submitted on: 3/21/2018 8:37:35 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Keith	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 8:38:11 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Edwin Sawa	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 8:40:13 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jennifer Di Cenzo	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 8:41:43 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Ryan Yoshida	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 8:43:23 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
David Takahashi	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 8:51:35 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jenny Yahiro	Individual	Oppose	No

Comments:

This bill is very unfair. It will increase gas rates for everyone. I oppose this bill.



HB-1801-HD-1

Submitted on: 3/21/2018 8:51:44 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Michelle Makii	Individual	Oppose	No

Comments:

This will dramatically increase gas rates. This is unfair and not right. I strongly oppose this bill.



HB-1801-HD-1

Submitted on: 3/21/2018 8:52:46 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jessica	Individual	Oppose	No

Comments:

This bill is unfair and will increase gas rates. I oppose this bill.



HB-1801-HD-1

Submitted on: 3/21/2018 8:58:27 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Roy Aipa	Individual	Oppose	No

Comments:

I oppose this bill. It will increase my gas rates. It is not good for us.



HB-1801-HD-1

Submitted on: 3/21/2018 9:02:09 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Millicent Sakamoto	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 9:05:45 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Cara Scoffings	Individual	Oppose	No

Comments:

I oppose this bill because I love cooking with Gas and I don't believe and I've never heard of renewable natural gas being readily available. I'm concerned for all restaurants on Maui that use gas as a critical part of their business. Additionally I find that my On-Demand gas water heater is much more efficient than electric water heaters. If power generation was already renewable than switching everything to electric may help improve the use of renewables, but since it's not this bill does not seem fair to the consumer and actually seems pointless.



HB-1801-HD-1

Submitted on: 3/21/2018 9:19:07 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jason Lau	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 9:32:07 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Phuong Nguyen	Individual	Oppose	No

Comments:

I oppose this bill because it will increase ratepayers energy cost at a time when people can least afford it. Salary is stagnant yet food, rent cost continue to increase. This bill will lead to higher renewable energy gas related costs.



HB-1801-HD-1

Submitted on: 3/21/2018 9:36:19 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Lin Paia	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 9:38:39 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Dawn M J Eusebio	Individual	Oppose	No

Comments:

I strongly oppose this bill. It will lead to increased rates to the gas ratepayers for all gas provided products Hawaii cannot go renewable at ANY COST, and ignore the effect on the ratepayer

Fixing RPS on electric utility is fine. Must be thoughtful and plan any RPS on Gas.



HB-1801-HD-1

Submitted on: 3/21/2018 9:39:32 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Mel Andrade	Individual	Oppose	No

Comments:

This bill is unfair. It will increase our gas rates. As it is we are paying way too much. This will make it worse. I oppose this bill.



HB-1801-HD-1

Submitted on: 3/21/2018 9:41:26 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jared Pasalo	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 9:47:23 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Gabriella Pacheco	Individual	Oppose	No

Comments:

I strongly oppose this bill.



HB-1801-HD-1

Submitted on: 3/21/2018 9:48:55 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
darrell RAMOS	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 10:14:39 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jeff	Individual	Oppose	No

Comments:

Seems to me like someone(s) are out to line the pockets of the solar companies. We should have the right to choose what source of energy we use.



HB-1801-HD-1

Submitted on: 3/21/2018 10:20:05 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Michael Felicida	Individual	Oppose	No

Comments:

This bill will cost too much money for the gas user. It is unfair that we will pay more for gas because of this bill. I oppose it.



HB-1801-HD-1

Submitted on: 3/21/2018 10:23:30 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Arleene Ige	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 10:23:52 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Colin Chikamoto	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 10:36:56 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Anthony Hoang	Individual	Oppose	No

Comments:

I opposed this bill.



HB-1801-HD-1

Submitted on: 3/21/2018 10:40:20 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Cheryl Watanabe	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 10:48:42 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Barney Yoshioka	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 10:54:41 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Cheryl Lien-Fua	Individual	Oppose	No

Comments:

I oppose this bill. I use both electric and propane in my home. I can't get to PV because of HECO application process (grid problems). Please do not DRIVE UP my propane gas cost by mandating this legislation. Since I will soon be on fixed income, please do not eat up my minimal retirement with higher utility bills. Thank you for your time and consideration.



HB-1801-HD-1

Submitted on: 3/21/2018 10:59:09 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
G Ota	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 10:59:52 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
John M. Matsunaga	Individual	Oppose	No

Comments:

I oppose this bill. This is not in my families best interest.



HB-1801-HD-1

Submitted on: 3/21/2018 11:00:15 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Cindy Miyashiro	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:02:03 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Denise Castillo	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:03:16 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Dean Uyehara	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:04:49 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Danielle Kamakawiwoole	Individual	Oppose	No

Comments:

This bill will increase gas rates tremendously and I oppose this bill.



HB-1801-HD-1

Submitted on: 3/21/2018 11:05:17 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Sio P Fua Jr	Individual	Oppose	No

Comments:

This bill will drive up energy costs and add a higher burden on fixed income local residents. Please stop mandating things that drive up the cost of living for ordinary local residents - we want to live on Oahu. We put up with SO MUCH to stay here: high cost of living, horrible traffic, an education system that is poorly ranked...please let our children afford to live here too and not move to the Mainland. Why do this to your local residents, your retired cannery/plantation workers?



HB-1801-HD-1

Submitted on: 3/21/2018 11:09:34 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Eugene Sakata	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:10:11 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Alana Higa	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:10:55 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Thomas DeCorte	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:13:29 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Laurie Chun	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:14:27 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Shawn Pedro	Individual	Oppose	No

Comments:

As a gas ratepayer/consumer, I stongly believe that this bill is unfairly targeting the Gas Utility companies like Hawaii Gas. This will lead to an increase in my gas utility rates and the States Idea of 100% Hawaii Renewable by 2045 is not realistic given our Geographic location. Furthermore, Propane or products of the like such as LNG burns much cleaner than the fuel source that is used to provide Electric power. The thought of potentially grouping the 2 industries into a single RPS is absurd. They should really be separated. For these reasons, I oppose this measure that will be presented to the House to go renewable at ANY COST and ingnoring the effect on the ratepayer.



HB-1801-HD-1

Submitted on: 3/21/2018 11:14:29 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Rae Ann Apaka	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:17:07 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Rick Martin	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:19:21 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Harry Sakaguchi	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:20:57 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Karen S Takenouchi	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:20:59 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Stefan Beresiwsky	Individual	Oppose	No

Comments:

This needs further study due to the commerial economics and logistics before pushing through a 100% renewable requirement



HB-1801-HD-1

Submitted on: 3/21/2018 11:23:39 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
constance gibo	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:24:12 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Calvert Okimoto	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:24:46 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Deborah S. Nance	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:29:20 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Kimberly Gomes	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:33:19 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Chris Johnson	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:33:27 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Rhys Kita	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:33:31 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Stanley Chock	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:34:50 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Darin Yoshioka	Individual	Oppose	No

Comments:

This bill will affect all gas rate payers negatively.



Aloha Chair Enoy, Chair Baker and members of the committees

My name is Lila Leue. I'm ten years old, born and raised in Waianae. It's the most beautiful place, with some of the best beaches on Oahu.

But sea level rise is threatening our beaches.

In fact, by the time I am as old as some of you, sea level rise may ~~permanently~~ flood homes and even Waianae Elementary where a lot of kids my age go to school.

Sea level rise is caused by greenhouse gases, which are warming the planet.

Last Friday Professor Chris Field, the top climate scientist in the world gave a lecture at UH. = University of Hawaii.

He said that if we want to stop warming going above two degrees, at the current rate we are ^{PRODUCING} ~~emitting~~ CO2, we have just 15 years and 7 months left.

That is really scary.

Most people don't know this but methane from which LNG is made, is 21 much worse greenhouse gas than CO2.

It's true that LNG is cleaner than oil or coal when you burn it. But if you look at the whole life of LNG, from the moment it comes out of the ground to the

moment it is burned, it is dirtier than oil or coal.

So please, if you are worried about the future of children like me, don't allow them to bring a lot of LNG to Hawaii.

Please pass this bill.

Thank you for this opportunity to testify.

CO₂ = CARBON DIOXIDE

LNG = LIQUIFIED

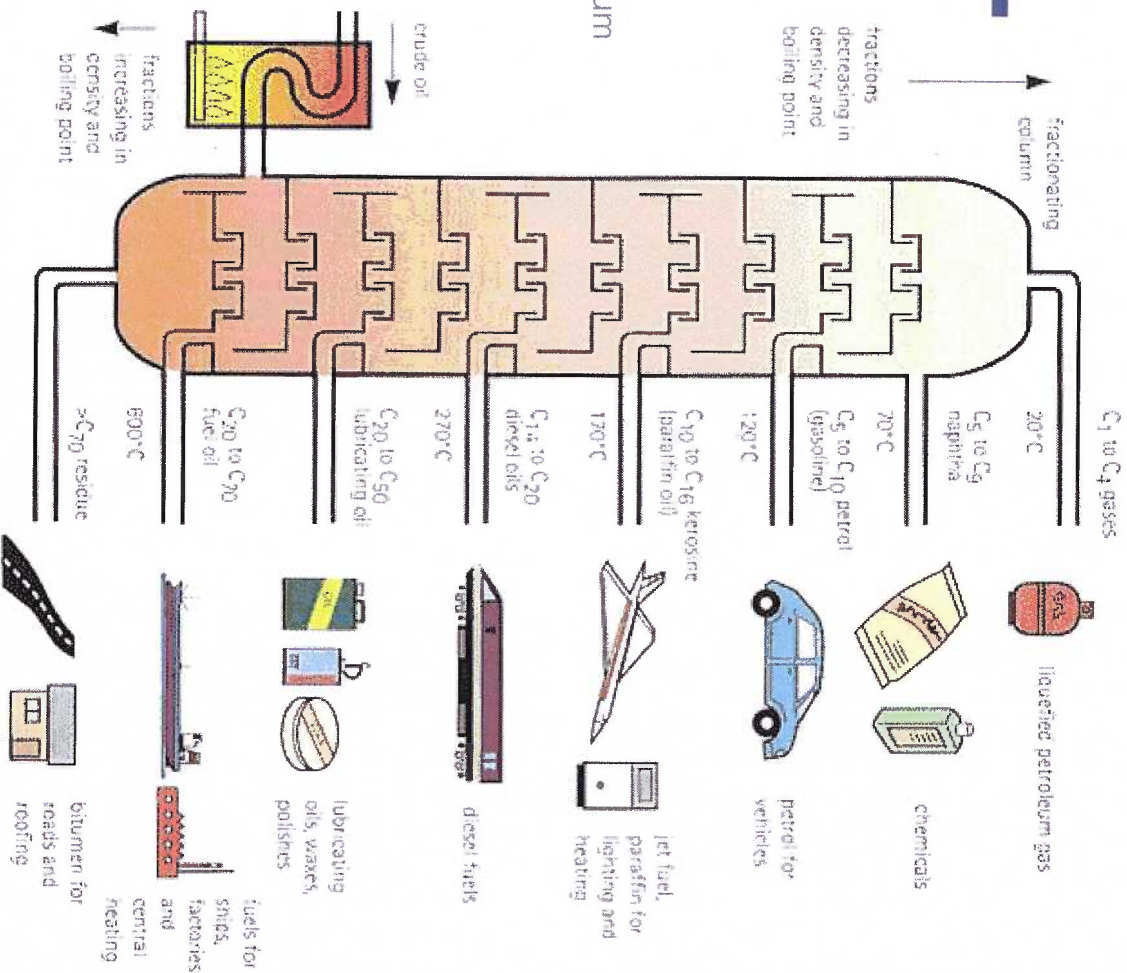
NATURAL GAS

UH = is the University of
= University of Hawaii

Fuels 101

You can't reduce one segment ... without reducing the others

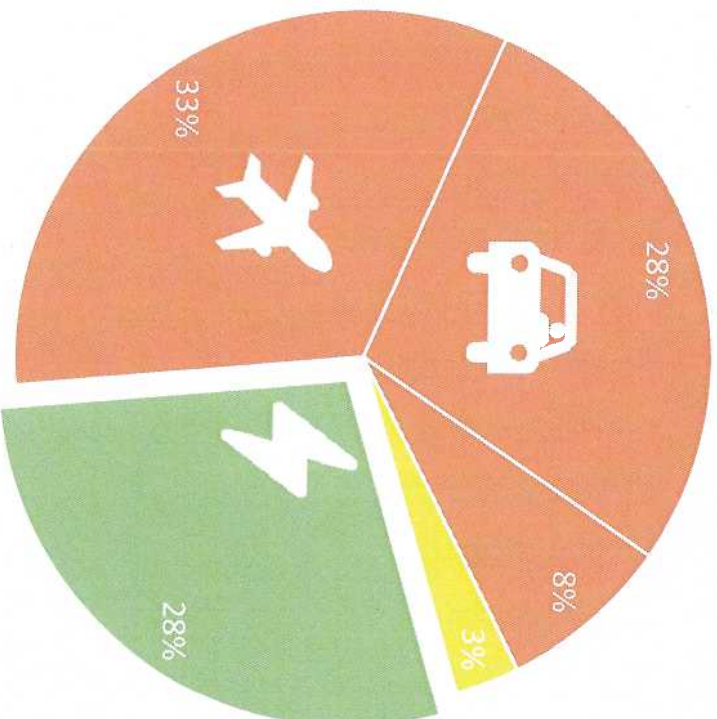
Traditional Petroleum Distillation Column



Hawaii's Petroleum Use by Mode Commercial and Military (2012)

Hawaii's Petroleum Use by
Mode Commercial and Military,
2012

Transportation 69%
Electricity 28%
Production 3%
Other 3%



- Electricity Production
- Commercial Aviation
- Ground Transport
- Marine Transport
- Other

2016 PSIP Estimated Biofuel/Bioenergy Demand			
Year	Scale (MW)	Island	Plant Type
2018		Moloka'i	Install two 5 MVA Synchronous Condensers
2018	48.84	O'ahu	6x8.14 Schofield Barracks biofuel-ready power plant
2020		Moloka'i	Pala'au diesel ICE powered on 100% biodiesel
2020		Maui	Biofuel-Ready 30MVA Synchronous Condenser (at Kahului?)
2020		Hawai'i	Biofuel-Ready 25MVA Synchronous Condenser (at Hill?)
2021		Oahu	Biofuel-Ready Synchronous Condenser at Honolulu
2022	38MW	Maui	20 MW Biomass and two 9MW NTA ICE
2022	100MW	Oahu	Biofuel-ready JBPHH plant
2023		Maui	Convert Kahului 1-4 to Synchronous Condensers
2023	54MW	Oahu	Biofuel-ready Kaneohe MCBH plant
2025	2MW	Maui	Biomass
2027	20MW	Hawai'i	Biomass
2028	151MW	Oahu	Biofuel-Ready Combined Cycle at Waiau
2028	151MW	Oahu	Biofuel-Ready Combined Cycle at Kahe
2032	302MW	Oahu	Biofuel-Ready Combined Cycle at Waiau
2035	2 MW	Maui	Biomass
2040	20 MW	Hawai'i	Biodiesel conversion for CT1
2040	40MW	Maui	Biomass
2045	71MW	O'ahu	Biodiesel
2045	90MW	Hawai'i	Biodiesel conversion at Keahole, HEP, CT3, Small diesels
2045	118 MW	Maui	Ma'alea, ICE biodiesel conversion

HB-1801-HD-1

Submitted on: 3/21/2018 11:35:26 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jenny	Testifying for Hawaii Gas	Oppose	No

Comments:

I am opposing HB1801 and to putting an RPS on the gas utility.

Reason being is that it will lead to increased rates to the gas ratepayers for all gas provided products. Thus, Hawaii cannot go renewable at ANY COST, and ignore the effect on the ratepayer. Fixing RPS on electric utility is fine. Must be thoughtful and plan any RPS on Gas.

Mahalo



HB-1801-HD-1

Submitted on: 3/21/2018 11:36:23 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Alinna Figueroa	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:39:46 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Susan Okouchi	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:44:21 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jennifer Manchester	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:45:15 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Ruth Matsunaga	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:46:56 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Angela Alday	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:51:58 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Elizabeth Rigor	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:54:04 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Sharon Shigemoto	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:56:42 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Arlene Gusman	Testifying for Hawaii Gas	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 11:58:49 AM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Kia Kekela	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 12:04:50 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jeryl Kam	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 12:05:45 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Ruby Tatsuno	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 12:12:39 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Ryan Kidani	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 12:15:51 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Lawton Sugihara	Individual	Oppose	No

Comments:

This Bill will negatively affect Gas Rate Payers



HB-1801-HD-1

Submitted on: 3/21/2018 12:18:23 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Neal Kadooka	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 12:32:23 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Leroy Nonaka	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 12:36:30 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position
John Penner	Individual	Oppose



Comments:

I strongly oppose this bill. When you single out a utility who has provided safe and reliable energy to this state for over 100 years and listen to forward thinking individuals who have no proven facts that this state would be able to survive in its current state or in a future state solely on renewable energy. Then how or why would you want to jeopardize this? .

We live on a rock in the middle of the ocean and are completely dependent on everything, like it or not this is where live and what we have to deal with every day. With our population numbers and goods and services we need to depend on all industries and services the islands could not even supply enough food for our current population. LNG,Propane and SNG provide a way cleaner alternative than diesel or Naphtha and power generation through gas turbines, it is much cleaner and viable than the current generators or dream of producing all of our power some day from renewables. Why are we the only state in the nation that wants to in act such a bill? What are the true consequences for this action and who will suffer the most? What is the cost to the existing system to upgrade to this so called renewable system. Who will be involved and who will have to pay for it. When you limit options cost rise it's not rocket science. Politicians need to look at how we have survived how we can continue to survive and if things can be tweaked or made more efficient along the way then ok, work together not make demands because of some political group. Make fact based decisions based on real established systems that deal with the needs of a state the size of ours and the actual needs

Technologies are getting better but its not 100 year proven technology and everyone needs to remember where we are and what we are subject to as far as weather is concerned Hurricanes and earthquakes. Remember INIKI when the people on Kauai were glad they had gas that allowed them to at least be able to cook and have hot water both do not require electricity to produce. If our grid system goes down because the wind mills and panels on your roof get damaged and gas is not an option to run a turbine then you will be like Puerto Rico and be in the dark for days and or running a generator.

Ironically you would depend on fossil fuels once the lights go out, but NOT TO KEEP THEM ON !!!

HB-1801-HD-1

Submitted on: 3/21/2018 12:53:13 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jared Wike	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 1:01:24 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Remigio Dela Cruz	Individual	Oppose	No

Comments:

This is not a realistic goal to have 100% renewable gas. It is not possible in Hawaii



HB-1801-HD-1

Submitted on: 3/21/2018 1:12:02 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Dean Russell	Individual	Oppose	No

Comments:

You can't hold a gas company to the same standards as HECO. There are many options for renewable electricty but there are not options for renewable gas.



HB-1801-HD-1

Submitted on: 3/21/2018 1:16:01 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
JEFFREY WON	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 1:16:38 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
T Viluan	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 1:20:23 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Tom Young	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 1:24:20 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Malia Napoleon	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 1:27:37 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Glenn Matsunaga	Individual	Oppose	No

Comments:

Renewable gas is not feasible in Hawaii.



HB-1801-HD-1

Submitted on: 3/21/2018 1:55:48 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jeremy Santiago	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 1:58:59 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Mailin Clark	Individual	Oppose	No

Comments:



HB-1801-HD-1

Submitted on: 3/21/2018 2:01:21 PM

Testimony for TRE on 3/21/2018 1:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jane Sakaguchi	Individual	Oppose	No

Comments:

