HAWAII STATE ENERGY OFFICE
STATE OF HAWAII

DAVID Y. IGE
GOVERNOR

SCOTT J.GLENN
CHIEF F ENERGY OFFICER

235 South Beretania Street, 5TH Floor, Honolulu, HI 96813 | energy.hawaii.gov

(808) 587-3807

Testimony of
SCOTT J. GLENN, Chief Energy Officer

before the
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
Thursday, January 23, 2020
9:00 AM
State Capitol, Conference Room #325

Comments in consideration of
HB 202
RELATING TO RENEWABLE ENERGY.

Chair Lowen, Vice Chair Wildberger and members of the Committee, the Hawaii State Energy Office (HSEO) offers comments on HB 202, which would replace the current renewable energy technology systems tax credit with tax credits for solar, wind, energy storage, and combined systems. Although the current version of the bill applies to taxable years beginning after 12/31/2018, we anticipate the applicable date would be revised. We defer to the appropriate agencies regarding administration of the provisions contained in the bill. It is our understanding that the bill would create the following categories and amounts of credit, subject to (as yet) unspecified cap amounts:

Section 235-	Page, Line	Type of System	Date / Percent of system cost			
12.5 (a)(1)	P 4, L 14	"solar energy system that is used exclusively to heat water" (3 categories: single-family residential / multi-family residential / commercial)	Until 2036 / **35%**			
12.5 (a)(2)	P5, L9	"solar energy system that is used primarily to generate electricity" (3 categories: single-family residential / multi-family residential / commercial)	Contract executed prior to 6-30-18 and system placed in service by 12-31-19 / **35%**	2018-2025 / **25%** (18.75% if used to meet solar water reqmt)	2026 / **20%** (16% if used to meet solar water reqmt)	2027 - 2036 / **15%** (12.75% if used to meet solar water reqmt)
12.5 (a)(3)	P8, L12	"solar energy system that is used primarily to generate electricity… provided	Contract executed prior to 6-30-18 and	2018-2025 / **25%** (18.75% if	2026 / **20%** (16% if used to	2027 - 2036 / **15%** (12.75% if

		that the solar energy system is grid-connected and incorporates an energy storage system" (3 categories: single-family residential / multi-family residential / commercial)	system placed in service before 12-31-19 / **35%**	used to meet solar water reqmt)	meet solar water reqmt)	used to meet solar water reqmt)
12.5 (a)(4)	P11, L18	"energy storage system"… if the cost of the energy storage system is not also included … under paragraphs (2), (3), or (6)	Contract executed prior to 6-30-18 and system placed in service before 12-31-19 / **35%**	2018-2025 / **25%**	2026 / **20%**	2027 - 2036 / **15%**
12.5 (a)(5)	P14, L1	"combined energy storage and solar energy system"	One-half the applicable credit under paragraph (4) plus one-half the applicable credit under paragraph (2) or (3)			
12.5 (a)(6)	P14, L10	"wind energy system"	Until 2036 / **20%** (16% if used to meet solar water reqmt)			

HSEO appreciates the gradual and orderly reduction in credit amounts, given budget constraints and a concern that abrupt changes in policy could have disruptive effects on current energy markets and project plans in the state. The HSEO recognizes that energy storage can play an important role in achieving Hawaii's clean energy goals, although it is unknown whether the proposed level of additional support for energy storage is either necessary or sufficient or if other policies would be more effective.

Should the Legislature moves forward with this bill, HSEO recommends removing Section 235-12.5 (a)(5), which provides tax credits for each combined energy storage and solar energy system, as it appears duplicative of the tax credits provided in Section 235-12.5(a)(3).

We defer to the appropriate agencies regarding the need for definitions of key terms, such as "customer service contract."

We also note that the definition of grid-connected (page 20, line 1) appears self-contradictory (emphasis added): " 'Grid-connected' means … or whose facility does **not** have an existing tie to the electric grid."

Finally, we note that the statutory language contained in Section 1 of the bill was revised in 2019, and references to "coordinator" on page 1, line 8; on page 2, line 13 (2 instances); and page 2, line 18 should be replaced with the term "chief energy officer of the Hawaii state energy office" to be consistent with current statutory language.

Thank you for the opportunity to testify.

DAVID Y. IGE
GOVERNOR

JOSH GREEN M.D.
LT. GOVERNOR

RONA M. SUZUKI
DIRECTOR OF TAXATION

DAMIEN A. ELEFANTE
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF TAXATION
P.O. BOX 259
HONOLULU, HAWAII 96809
Phone: (808) 587-1540 / Fax: (808) 587-1560
Email: Tax.Directors.Office@hawaii.gov

To: The Honorable Nicole E. Lowen, Chair;
The Honorable Tina Wildberger, Vice Chair;
and Members of the House Committee on Energy & Environmental Protection
From: Rona M. Suzuki, Director
Department of Taxation

Re: **H.B. 202, Relating to Renewable Energy**
Date: Thursday, January 23, 2020
Time: 9:00 A.M.
Place: Conference Room 325, State Capitol

The Department of Taxation (Department) has concerns about its ability to administer H.B. 202 and offers the following comments for the Committee's consideration.

H.B. 202 makes significant amendments to section 235-12.5, Hawaii Revised Statutes (HRS), which governs the Renewable Energy Technologies Income Tax Credit (RETITC).

The Department offers the following comments for the Committee's consideration:

1. First, the Department notes that the term "system," which is not defined in existing HRS or by this measure, has caused much confusion and uncertainty for taxpayers and industry participants and has resulted in a much larger than anticipated number of RETITC claims and revenue lost. The ambiguity in the statute was ultimately addressed by the Department's enactment of administrative rules pertaining to the RETITC in November 2012. (See sections 18-235-12.5-01 through 18-235-12.5-06, Hawaii Administrative Rules (HAR)).

   The proposed definition of "energy storage system" is not sufficient for taxpayers to calculate and for the Department to administer the credit. Without additional guidelines or thresholds, such as required minimum energy capacity to be considered a "system," there is no way for the Department to properly determine how many credits should be allocated to each taxpayer. Although the Department has adopted administrative rules to define the word "system" for solar energy installations in the past, it believes that the Legislature should exercise its lawmaking authority in determining how many credits a taxpayer may be eligible for. Since the RETITC is available "per system," the definition directly impacts the availability of the credit. The current version of the law was passed in 2009 and it is not clear from researching the legislative history whether the intent was to allow more than one credit per installation. However, the current and accepted interpretation is that more than one credit is available depending on the size of the installation. As such, the Department strongly believes that this issue needs to be resolved if the RETITC is to

be expanded as proposed.

2. If the intent of the Legislature is to make Hawaii's tax credit more similar to the federal residential energy efficient property tax credit, the Department recommends allowing taxpayers to claim a credit equal to a percentage (e.g., 10%) of the federal tax credit, without applying a cap. For example, the Hawaii credit could simply be calculated as 10% of the basis. As discussed above, structuring the credit around per system caps without adequately defining the term "system" required the Department to make a policy decision that is normally reserved for the Legislature. If the Legislature does not wish to create specific definitions and guidelines for how an "energy storage system" should be credited, then changing the RETITC to a credit equal to a percentage of the federal tax credit would be a straightforward way to eliminate major administrative difficulties and avoid unintended revenue losses.

3. The effective date of the measure and the other dates referenced need to be updated. The Department requests that any changes to the RETITC begin on January 1, 2021 and apply to taxable years beginning after December 31, 2020. This will give the Department time to adjust forms and complete the technical development needed to enact the provisions specified.

Thank you for the opportunity to provide comments.

Testimony to the Committee on Energy and Environmental Protection
Thursday, January 23, 2020
9:00 AM
Conference Room 325, Hawaii State Capitol
House Bill 202

Chair Lowen, Vice Chair Wildberger, and members of the committee,

174 Power Global **supports** HB 202, which relates to renewable energy tax credits. We know how essential clean energy is to Hawaii's future, and we are proud to be among the developers that bring these projects to life across the state.

The legislature understands how important commercial utility-scale renewable energy projects are to the state's stated 2045 clean energy goal, and has wisely included investment tax credits to develop such projects. However, every year, the legislature is faced with considering proposals that change or eliminate renewable energy tax credits—proposals that would dramatically impact renewable energy projects that are already under development and contracted through a competitive bid process with the reliance on the tax credits that were available at the inception of the project.

These renewable energy tax credits are applied to the rates that are contracted with the electric utility and are ultimately reflected in the rates benefitting ratepayers. Changes to these credits, once a project is already contracted and underway, put in jeopardy the finance-ability and overall viability of the project. This unintended consequence creates several unfortunate scenarios: the ratepayers are denied the benefits originally contracted, the projects are put at risk, the state stands to lose any federal tax credits applied to the project, which are rapidly declining and the state runs a risk of endangering its progress towards its 2045 goal.

Put simply, without those credits, the projects run the risk of not being viable and not bringing those benefits to those who need it most: the ratepayers of Hawaii.

So that projects can be assured that their financing and construction plans will not be derailed by a change in the tax credits originally included in the project, there is a clear need for certainty that those original credits will be consistent through its completion and execution. Commercial utility-scale projects that are currently under development are not eligible to apply for renewable energy tax credits until after projects are commercially operational.

Therefore, we support HB202, and we request that if the legislature amends HRS §235-12.5, that it include a provision to preserve the tax credits for commercial properties that had a power purchase agreement approved by the Public Utilities Commission prior to December 31, 2019.

Attached is our recommended amendment:

300 Spectrum Center Drive, Suite 1020 | Irvine , California, 92694 | Telephone: 949.748.5970

Hoʻohana Solar 1 LLC

Section 2 (a)

(1) For each solar energy system: thirty-five per cent of the actual cost or the cap amount determined in subsection (b), whichever is less; [~~or~~] provided that notwithstanding any law to the contrary and any change to this section 235-12.5(a)(1), a power purchase agreement approved by the Public Utilities Commission prior to December 31, 2019, shall receive thirty-five percent of the actual cost or the cap amount determined in subsection (b), up to the applicable cap amount of $500,000 per megawatt direct current for systems installed on commercial property; whichever is less, or

Thank you for the opportunity to testify.

300 Spectrum Center Drive, Suite 1020 | Irvine , California, 92694 | Telephone: 949.748.5970

ADON RENEWABLES

45-781 Kamehameha Hwy., Kaneohe, Hawaii 96744
Phone (808) 236-1110 * Fax (808) 236-1700
www.adonrenewables.com
Good People, Great Service, Changing the way electricity is delivered to our community

Testimony to the Committee on Energy and Environmental Protection

Thursday, January 23, 2020
9:00 AM
Conference Room 325, Hawaii State Capitol

House Bill 202

Chair Lowen, Vice Chair Wildberger, and members of the committee,

ADON supports HB 202, which relates to renewable energy and contemplates changes in the renewable energy tax credit.

As the legislature knows, the cost of living in Hawaii is the highest in the nation, placing a tremendous burden on much of our population. For many in Hawaii, home ownership is simply out-of-reach, leaving over 56% of our population relying on rental properties for their housing. These renters are often the members of our communities most in need of our help, including senior citizens, working families, and low-income residents. Like most people in Hawaii, these renters also want to participate in Hawaii's clean and renewable energy, but because the existing investment tax credit for multi-family dwellings, where most of these renters live, is not equitable with that offered to single family and commercial properties, these local residents are left out.

These incentive tax credits are essential to the affordability of renewable projects, which are passed on to the tenants in the form of discounted energy rates. At the current rate, without that tax credit, there is very little incentive for these projects to be pursued in multi-family dwellings, denying those who need it most a bigger break in their utility bills.

In the Session Laws of Hawaii, 2006, (Act 240), the legislature increased the cap for photo-voltaic energy systems for single family dwellings over 285% and for commercial dwellings by 200%. Multi-family dwellings, however, were left at the cap established in Session Laws of Hawaii, 2003, leaving this disadvantaged segment behind.

We request the following amendments be included in HB 202 in order to increase the cap for multi-family properties for solar energy projects from $350 to $750 per unit.

In order to benefit this demographic – those who need our help the most – we request that this change take effect on December 31, 2019.

We request the following amendments be considered

Page 5 line 5: Insert $750 per unit where the per unit per solar energy system for multi-family residential property:

(B) $ ~~[~~ 750 per unit per solar energy system for multi-family residential property; and

Page 6 line 7: Insert $750 per unit where the per unit per solar energy system for multi-family residential property

7 (ii) $[ ] 750 per unit per solar energy system
8 for multi-family residential property; and

Page 7 line 12: Insert $750 per unit where the per unit per solar energy system for multi-family residential property:

12 (ii) $[ ] $750 per unit per solar energy system
13 for multi-family residential property; and

Page 8 Line 8 Insert $750 per unit where the per unit per solar energy system for multi-family residential property:

8 (ii) $[ ] $750 per unit per solar energy system
9 for multi-family residential property; and

Page 9 Line 12 Insert $750 per unit where the per unit per solar energy system for multi-family residential property:

12 (ii) $[ ] $750 per unit per solar energy system
13 for multi-family residential property; and

Page 10 Line 17 Insert $750 per unit where the per unit per solar energy system for multi-family residential property:

17 (ii) $[ ] $750 per unit per solar energy system
18 for multi-family residential property; and

Page 11 Line 14 Insert $750 per unit where the per unit per solar energy system for multi-family residential property:

14 (ii) $[ ] $750 per unit per solar energy system
15 for multi-family residential property; and

Page 12 Line 11 Insert $750 per unit where the per unit per solar energy system for multi-family residential property:

11 (ii) $[ ] $750 per unit per solar energy system
12 for multi-family residential property; and

Page 13 Line 8 Insert $750 per unit where the per unit per solar energy system for multi-family residential property:

8 (ii) $[ ] $750 per unit per solar energy system
9 for multi-family residential property; and

Thank you for reviewing our remarks and considering these amendments.

EAH

A NONPROFIT HOUSING CORPORATION

January 22, 2020

Chair Lowen, Vice Chair Wildberger and Members of the Committee on Energy & Environmental Protection
House of Representatives
Hawaii State Capitol
415 South Beretania Street
Honolulu, Hawaii 96813

Subject: Support of HB 202 Relating to Renewable Energy, Hearing at 09:00AM on January 23, 2020, Room 325

Chair Lowen, Vice Chair Wildberger and members of the Committee:

I am Kevin Carney, Vice President of EAH Housing. EAH is a 51-year-old non-profit public benefit corporation whose mission is to develop, manage and promote quality affordable rental housing. We are one of the largest non-profit affordable rental housing developers in the western United States. We have developed over 100 affordable rental properties, manage 185 rental properties (over 10,000 leases) and we serve over 22,000 residents in communities in California and Hawaii. The people we serve are primarily those with incomes at or below 60% of the area median income (AMI). For Honolulu that translates to a maximum income of $72,400 for a family of four. Studies have shown that the greatest need for housing is at the 80% AMI level and below.

EAH is in strong support of HB 202 to increase the energy tax credit for multifamily dwellings. The increase in the value of the credits will help to make the installation of energy efficient systems more viable for the low-income housing projects that we develop and manage. As long-term owners and managers (EAH have never sold a property) we strive to produce housing that is sustainable and as energy efficient as possible to reduce our operating costs, thereby helping to keep our rents affordable. And, we also work with our residents to provide them with educational materials on how they can reduce energy within their units.

Please give HB202 your full support. Thank you for the opportunity to provide input on this issue.

Sincerely,

Kevin R. Carney, RB-16444
(PB), NAHP-E
Vice President, Hawaii

Hawaii Regional Office
1001 Bishop Street, Suite 2880
Honolulu, Hawaii 96813
808 523-8826 ■ Fax 808 523-8827

Main Office
2169 East Francisco Blvd., Suite B
San Rafael, California 94901-5531
415 258-1800 ■ Fax 415 453-4927

HB-202
Submitted on: 1/22/2020 8:50:56 AM
Testimony for EEP on 1/23/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Dustin Verity	Verity CPAs	Support	No

Comments:

Testimony to the Committee on Energy and Environmental Protection

Thursday, January 23, 2020

9:00 AM

Conference Room 325, Hawaii State Capitol

House Bill 202

Chair Lowen, Vice Chair Wildberger, and members of the committee,

Verity CPAs supports HB 202, which relates to renewable energy and contemplates changes in the renewable energy tax credit.

As the legislature knows, the cost of living in Hawaii is the highest in the nation, placing a tremendous burden on much of our population. For many in Hawaii, home ownership is simply out-of-reach, leaving over 56% of our population relying on rental properties for their housing. These renters are often the members of our communities most in need of our help, including senior citizens, working families, and low-income residents. Like most people in Hawaii, these renters also want to participate in Hawaii's clean and renewable energy, but because the existing investment tax credit for multi-family dwellings, where most of these renters live, is not equitable with that offered to single family and commercial properties, these local residents are left out.

These incentive tax credits are essential to the affordability of renewable projects, which are passed on to the tenants in the form of discounted energy rates. At the current rate, without that tax credit, there is very little incentive for these projects to be pursued in multi-family dwellings, denying those who need it most a bigger break in their utility bills.

In the Session Laws of Hawaii, 2006, (Act 240), the legislature increased the cap for photo-voltaic energy systems for single family dwellings over 285% and for commercial dwellings by 200%. Multi-family dwellings, however, were left at the cap established in Session Laws of Hawaii, 2003, leaving this disadvantaged segment behind.

We request the following amendments be included in HB 202 in order to increase the cap for multi-family properties for solar energy projects from $350 to $750 per unit.

In order to benefit this demographic – those who need our help the most – we request that this change take effect on December 31, 2019.

We request the following amendments be considered

Page 5 line 5: Insert $750 per unit where the per unit per solar energy system for multi-family residential property:

5 (B) $ ~~[ ]~~ 750 per unit per solar energy system for

6 multi-family residential property; and

Page 6 line 7: Insert $750 per unit where the per unit per solar energy system for multi-family residential property

7 (ii) ~~$[ ]~~ 750 per unit per solar energy system

8 for multi-family residential property; and

Page 7 line 12: Insert $750 per unit where the per unit per solar energy system for multi-family residential property:

12 (ii) ~~$[ ]~~ $750 per unit per solar energy system

13 for multi-family residential property; and

Page 8 Line 8 Insert $750 per unit where the per unit per solar energy system for multi-family residential property:

8 (ii) ~~$[ ]~~ $750 per unit per solar energy system

9 for multi-family residential property; and

Page 9 Line 12 Insert $750 per unit where the per unit per solar energy system for multi-family residential property:

12 (ii) ~~$[ ]~~ $750 per unit per solar energy system

13 for multi-family residential property; and

Page 10 Line 17 Insert $750 per unit where the per unit per solar energy system for multi-family residential property:

17 (ii) $[ ] $750 per unit per solar energy system

18 for multi-family residential property; and

Page 11 Line 14 Insert $750 per unit where the per unit per solar energy system for multi-family residential property:

14 (ii) $[ ] $750 per unit per solar energy system

15 for multi-family residential property; and

Page 12 Line 11 Insert $750 per unit where the per unit per solar energy system for multi-family residential property:

11 (ii) $[ ] $750 per unit per solar energy system

12 for multi-family residential property; and

Page 13 Line 8 Insert $750 per unit where the per unit per solar energy system for multi-family residential property:

8 (ii) $[ ] $750 per unit per solar energy system

9 for multi-family residential property; and

Thank you for reviewing our remarks and considering these amendments.

TESTIMONY REGARDING HB 202

being heard by the House Committee on Energy and Environmental Protection
on Thursday, January 23, 2020 at 9:00 AM

Aloha Chair Lowen and Members of the Committee:

Thank you for the opportunity to provide testimony regarding HB 202, which would modify the current Renewable Energy Technology Tax Credit (REITC) program, by ramping down the tax credit available to solar and wind systems and adding energy storage as an eligible technology. Tesla conceptually supports this bill as way to further advance Hawaii's pace-setting efforts to transition to 100% renewable energy, an effort within which storage plays a key role.

Tesla's mission is to accelerate the world's transition to sustainable energy through the deployment of electric vehicles and sustainable energy products, like storage and solar. As the penetration of variable renewable resources, most notably solar, has increased in the state, it makes sense for the policies to evolve to actively support the deployment of energy storage technologies, recognizing that storage has an essential role to play in integrating renewable energy onto the grid. Energy storage in effect transforms an "as-available" resource, i.e. one that produces energy based on when the wind blows or sun shines, into a resource that can be actively dispatched based on the needs of the energy system.

In addition to the central role in integrating renewable resources and facilitating the State's transition to renewable energy, energy storage can also benefit the grid in a number of other ways. Leveraged through well-designed programs, energy storage offers the potential to significantly improve overall grid resiliency and efficiency and can serve as an alternative to costly investments in distribution and transmission infrastructure by storing and delivering power in transmission or distribution constrained areas during times of grid congestion. For these reasons, Tesla supports including energy storage as an eligible technology under the REITC.

At this point, however, while we are conceptually supportive of the bill as drafted, there are a number of details which are currently missing from the bill that once included will materially impact the overall effects of the bill on renewable energy development in the state. We strongly support the notion of expanding the REITC to include storage, and further are not opposed to offsetting the budgetary impacts of that expansion by reducing the solar tax credit in a reasonable manner and timeframe. However, until all of the details have been fleshed out, we cannot offer full-throated support.

We also wish to strike a note of caution even as it relates to our conceptual support for this measure. In each legislative session over the past four years, the legislature has introduced similar legislation initially conceived as a way to recognize the increased role of storage by expanding the tax credit to include energy storage solutions. Inevitably, in each year, as the bill made its way through the process, it was transformed into a vehicle exclusively focused on eliminating the solar tax credit, with little if anything by way of support for energy storage. Such a dramatic change to the existing REITC would do significant

damage to the renewable energy market in Hawaii, and fail to support the state's efforts to fulfill it 2045 mandate to go 100% renewable.

We hope that the legislature and this committee appreciate this concern and can take whatever steps are necessary to ensure this measure does not get repurposed as a tool to undermine rather than advance the state's interests in promoting renewable energy deployment.

Thank you for the opportunity to submit this testimony.

LEGISLATIVE TAX BILL SERVICE

TAX FOUNDATION OF HAWAII

126 Queen Street, Suite 304 Honolulu, Hawaii 96813 Tel. 536-4587

SUBJECT: INCOME, FRANCHISE, Renewable Energy Technologies Credit

BILL NUMBER: HB 202

INTRODUCED BY: LOWEN

EXECUTIVE SUMMARY: Amends the renewable energy technologies income tax credit to change limitations for certain technology types. Provides increased caps for photovoltaic property that is grid-connected and incorporates energy storage system. Allows credit for commercial seawater air conditioning system. Generally, the credit is being phased down, perhaps in recognition that the technology involved is no longer new. If approved, the credit would be an indeterminate expenditure of public dollars out the back door and could carry with it large administrative costs.

SYNOPSIS: Amends HRS section 196-6.5 to allow installation of any renewable energy technology system to substitute for the mandatory solar water heater in any new single-family residential construction.

Amends HRS section 235-12.5, to be retitled the solar energy, energy storage, wind energy system income tax credit, to allow credits for each energy system, as follows:

For each solar energy system used exclusively to heat water and is installed and first placed in service in the State by a taxpayer during the taxable year: 35% of the basis up to the applicable cap amount, which is determined as follows: (A) $_____ per solar energy system for single-family residential property; (B) $_____ per unit per solar energy system for multi-family residential property; and (C) $_____ per solar energy system for commercial property.

For each solar energy system used primarily to generate electricity, the credit is a certain percentage of the basis up to the applicable cap amount, which is determined as follows: (A) $_____ per solar energy system for single-family residential property, except that if all or a portion of the property is used to fulfill the substitute renewable energy technology requirement in section 196 6.5(a)(3), HRS, the credit will be reduced by 25% of basis or $_____, whichever is less; (B) $_____ per unit per solar energy system for multi-family residential property; (C) $_____ per solar energy system for commercial property. The credit rate is 25% for calendar years 2019 to 2025; 20% for calendar year 2026, and 15% for calendar year 2027 and thereafter. Special grandfather rules are provided where a system has an executed customer service contract dated prior to June 30, 2018 and is installed and first placed in service before Dec. 31, 2019.

For each grid-connected solar energy system used primarily to generate electricity that incorporates an energy storage system, the credit is a certain percentage of the basis up to the applicable cap amount, which is determined as follows: (A) $_____ per solar energy system for single-family residential property, except that if all or a portion of the property is used to fulfill the substitute renewable energy technology requirement in section 196 6.5(a)(3), HRS, the credit

will be reduced by 25% of basis or $_____, whichever is less; (B) $_____ per unit per solar energy system for multi-family residential property; (C) $_____ per solar energy system for commercial property. The credit rate is 25% for calendar years 2019 to 2025; 20% for calendar year 2026, and 15% for calendar year 2027 and thereafter. Special grandfather rules are provided where a system has an executed customer service contract dated prior to June 30, 2018 and is installed and first placed in service before Dec. 31, 2019.

For each energy storage system, the credit is a certain percentage of the basis up to the applicable cap amount, which is determined as follows: (A) $_____ per system for single-family residential property, except that if all or a portion of the property is used to fulfill the substitute renewable energy technology requirement in section 196 6.5(a)(3), HRS, the credit will be reduced by 25% of basis or $_____, whichever is less; (B) $_____ per unit per system for multi-family residential property; (C) $_____ per system for commercial property. The credit rate is 25% for calendar years 2019 to 2025; 20% for calendar year 2026, and 15% for calendar year 2027 and thereafter. Special grandfather rules are provided where a system has an executed customer service contract dated prior to June 30, 2018 and is installed and first placed in service before Dec. 31, 2019.

For a combined energy storage and solar energy system, the applicable credit is that for an energy storage system plus half of that for the solar energy system.

A grid-connected wind energy system is also creditable, and the credit rate is 20% of basis up to the applicable cap amount, which is determined as follows: (A) $_____ per wind energy system for single-family residential property, except that if all or a portion of the property is used to fulfill the substitute renewable energy technology requirement in section 196 6.5(a)(3), HRS, the credit will be reduced by 20% of basis or $_____, whichever is less; (B) $_____ per unit per wind energy system for multi-family residential property; and (C) $_____ per wind energy system for commercial property.

Defines "basis" on which the credit is based as costs related to the solar energy, wind energy, or energy storage system, including accessories, installation, energy storage, and cost of construction, but does not include the cost of consumer incentive premiums unrelated to the operation of the energy system or offered with the sale of the energy system and costs for which another credit is claimed under this chapter. Any cost incurred and paid for the repair, construction, or reconstruction of a structure in conjunction with the installation and placing in service of a solar energy, wind energy, or commercial seawater air conditioning system, such as the reroofing of single-family residential property, multi-family residential property, or commercial property, shall not constitute a part of the basis for the purpose of this section; provided that costs incurred for the physical support of the solar or wind energy system, such as racking and mounting equipment and costs incurred to seal or otherwise return a roof to its pre-installation condition, shall constitute part of the basis for the purposes of this section. States that basis shall be consistent with the use of the term basis in section 25D or section 48 of the Internal Revenue Code.

Defines "energy storage system" as any identifiable facility, equipment, apparatus, or the like, including a battery, grid interactive water heater, or ice storage air conditioner, that is permanently fixed to a site and electrically connected to a site distribution panel by means of installed wiring, and that receives electricity generated from various sources, stores that electricity as electrical, chemical, thermal, or mechanical energy, and delivers the energy back to an electric utility or the user of the electric system at a later time.

Defines "first placed in service" the same as in Treas. Reg. section 1.167(a)-11(e)(1).

Defines "grid-connected" as where the individual or corporate taxpayer has obtained an approved interconnection agreement from an electric utility for the solar energy system or whose facility does not have an existing tie to the electric grid.

Defines "solar or wind energy system" as any identifiable facility, equipment, apparatus, or the like that converts solar or wind energy to useful thermal or electrical energy for heating, cooling, or reducing the use of other types of energy that are dependent upon fossil fuel for their generation, if (A) the construction, reconstruction, or erection of the solar or wind energy system is completed by the taxpayer; or (B) the solar or wind energy system is acquired by the taxpayer if the original use of the solar or wind energy system commences with the taxpayer.

The tax credit is nonrefundable by default, but a taxpayer may elect to give up 30% of the credit to make it refundable. Alternatively, a taxpayer whose adjusted gross income is $20,000 or less for single filers or $40,000 or less for joint filers may elect to make the tax credit refundable without discount. If a taxpayer receives the nonrefundable credit and is unable to use all of it, the unused credit may be carried forward indefinitely until exhausted. Spouses not filing a joint return may only make the election to the extent that they would have been able to make the election if they had filed a joint return. An election once made is irrevocable.

Provides that a planned community association, condominium association of owners, or cooperative housing corporation may claim the tax credit under this section in its own name for property or facilities placed in service and located on common areas.

Makes technical and conforming changes.

EFFECTIVE DATE: July 1, 2019. Changes to the credit statute take effect for taxable years beginning after December 31, 2018.

STAFF COMMENTS: The tax system is there to raise revenue to keep the government moving. Using the tax system to shape social policy merely throws the revenue raising system out of whack, making the system less than reliable as there is no way to determine how many taxpayers will avail themselves of the credit and in what amount.

Furthermore, tax credits are nothing more than the expenditure of public dollars, but out the back door. If, in fact, these dollars were subject to the appropriation process, would taxpayers be as generous about the expenditure of these funds when our kids are roasting in the public school classrooms, there isn't enough money for social service programs, or our state hospitals are on the verge of collapse?

If lawmakers want to subsidize the purchase of this type of technology, then a direct appropriation would be more accountable and transparent. The credit as currently drafted is very complex. Complexity makes proper administration of the credit very difficult. There will be taxpayers who will not claim the credit properly because of honest mistakes or misunderstandings, as well as bad actors who will intentionally claim the credit improperly for profit. Less complexity reduces the number of the former and makes it easier to catch the latter.

In addition, key numbers in the legislation have not been filled in, making it difficult or impossible to estimate its revenue impact.

Furthermore, the additional credit would require changes to tax forms and instructions, reprogramming, staff training, and other costs that could be massive in amount. A direct appropriation, or adding on to an existing program such as Hawaii Energy, may be a far less costly method to accomplish the same thing.

Digested 1/21/2020

183 Pinana St., Kailua, HI 96734 • 808-262-1285 • info@350Hawaii.org

To: The House Committee on Energy & Environmental Protection
From: Brodie Lockard, Founder, 350Hawaii.org
Date: Thursday, January 23, 2020, 9:00 am

In strong support of HB 202

Dear Chair Lowen, Vice Chair Wildberger, and members:

350Hawaii strongly supports HB 202. Solar water heaters save homeowners and renters money, and fight the Climate Crisis in a simple, reliable way that is ideal for sunny Hawaii.

Gas utilities argue that solar water heaters make affordable housing too expensive. Solar water heaters will indeed increase affordable housing costs while the installation is being paid off--about four to five years. But for the housing's remaining life, there will never be a gas bill. The housing will be more affordable than with gas-heated water.

Gas utilities also argue that consumers should have a choice of a gas water heater. Developers nearly always choose the type of water heater, not homeowners. And to save money in the short term, developers usually choose gas. In the long term, homeowners and renters must use what's there. Traditional water heating consumes almost 20% of a household budget [1]. The sun is free.

Gas water heaters contribute heavily to the Climate Crisis, which is clearly affecting all of us. No one has a right to "choose" it for the rest of us. Hawaii has decided that we should ban plastic bags, because eliminating that "choice" benefits us significantly as a society. No one benefits from choosing gas except developers and gas companies.

Finally, gas utilities argue that requiring solar water heaters will cost workers' jobs. But HB 202 applies only to new buildings. Workers will continue to serve all existing gas customers.

Do you want to help renters and homeowners save money in the long term, and help fight the Climate Crisis?

If you do, pass HB 202.

Brodie Lockard
Founder, 350Hawaii.org

[1] https://www.consumerreports.org/cro/water-heaters/buying-guide/index.htm

LATE

Hawaii Solar Energy Association

Serving Hawaii Since 1977

TESTIMONY OF THE HAWAII SOLAR ENERGY ASSOCIATION IN REGARD TO HB 202, RELATING TO RENEWABLE ENERGY BEFORE THE HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION ON THURSDAY, JANUARY 23, 2020

Chair Lowen, Vice-Chair Wildberger, and members of the committee, my name is Will Giese, and I am the Executive Director of the Hawaii Solar Energy Association, Inc. (HSEA).

The HSEA was founded in 1977 to further solar energy and related arts, sciences and technologies with concern for the ecologic, social and economic fabric of the Hawaiian Islands. Our membership includes the vast majority of locally owned and operated solar installers, contractors, distributors, manufacturers, and inspectors across all islands.

HSEA **supports the intent of HB202**. This measure replaces the current renewable energy technology systems tax credit with tax credits for solar or wind energy systems and energy storage systems. Applies to taxable years beginning after 12/31/2018.

The HSEA has generally been in favor of tax credits for energy storage and renewable energy systems as a way for the state to direct customer behavior towards it's renewable energy goals. This has been generally successful, and Hawaii enjoys one of the highest amounts of renewable energy installed per capita than any other state.

It is important to understand the impact that behind-the-meter resources have on the average consumer electric bills. According to DBEDT's own data, the AVERAGE consumer electric bill DECLINE by more than 20% between 2011 and 2018, despite the cost of electricity remaining approximately the same (See Fig 1.). The two biggest clean energy developments during this time period were large scale build-outs of rooftop photovoltaics and energy efficiency programs. Regardless of whether a Hawaii electric customer has a solar system, they

Table 3: **RESIDENTIAL, AVERAGE RATE ($/KWH)**

Year	State Total	Oahu	Hawaii	Kauai	Lanai	Maui	Molokai
2011	$0.35	$0.32	$0.42	$0.43	$0.44	$0.36	$0.43
2012	**$0.37**	$0.35	$0.42	$0.45	$0.47	$0.39	$0.46
2013	**$0.37**	$0.35	$0.42	$0.44	$0.46	$0.38	$0.46
2014	**$0.37**	$0.35	$0.42	$0.43	$0.46	$0.38	$0.47
2015	**$0.30**	$0.28	$0.35	$0.34	$0.38	$0.31	$0.38
2016	**$0.28**	$0.26	$0.32	$0.34	$0.34	$0.29	$0.33
2017	$0.30	$0.28	$0.34	$0.35	$0.36	$0.31	$0.36
2018	$0.33	$0.31	$0.37	$0.37	$0.40	$0.34	$0.37

Source: State of Hawaii Data Book

Table 4: **RESIDENTIAL, AVERAGE MONTHLY BILL**

Year	State Total	Oahu	Hawaii	Kauai	Lanai	Maui	Molokai
2011	$202	$195	$218	$205	$192	$219	$161
2012	$203	$197	$210	$209	$192	$222	$159
2013	**$189**	$181	$199	$205	$199	$211	$153
2014	**$185**	$178	$192	$199	$203	$206	$147
2015	**$149**	$141	$157	$163	$159	$168	$115
2016	**$135**	$127	$142	$163	$142	$147	$102
2017	$145	$137	$154	$170	$150	$157	$115
2018	$163	$155	$175	$187	$179	$180	$121

Source: State of Hawaii Data Book

Figure 1Avg. Customer Elec. Rates 2011-2018

still benefit from every new system that is placed on the grid. Additionally, technologies like energy storage provide further benefits to grid stability and resilience, utility infrastructure cost savings, and peak shaving.

Additionally, arguments that "solar is for the rich" are patently untrue. Besides a common sense understanding of the solar market, such as the fact that most affluent residents already have installed solar over 5 years ago, or that LMI consumers have a greater financial incentive to adopt solar, this is also backed up by DBEDT's data. The figure below shows widespread geographic dispersion of residential energy storage developments, regardless of AMI (See Fig 2.).

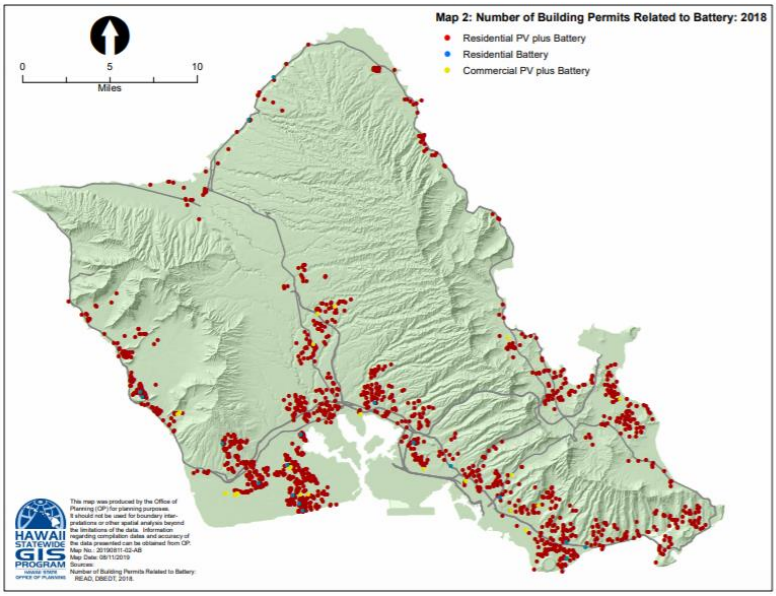

Figure 2: Number of Building Permits w/ Energy Storage 2018

The fact of the matter is that the solar tax credit is working as intended. It has brought thousands of good paying jobs to the state of Hawaii, helped drive down consumer electric prices, furthered state goals, and allowed electric customer to take control of their energy choices.

It also isn't just the solar industry that benefits from more rooftop solar. The 2018 Transcending Oil report (link: https://www.transcendingoil.com/) found that increasing the speed of our RPS goals would be cheaper over time to all ratepayers than if we remain on the 2045 RPS track. HECO itself said in Appendix H, Book 3, Page H-4 of its Power Supply Improvement Plan that it is planning for 100% of single family homes to have PV by 2045.

The Hawaii State Legislature also must be cognizant of developments regarding the federal tax credit. The solar industry is currently experiencing an increased amount of business activity for the past 12 months, driven almost completely by the first step down in the federal tax credit, from 30% to 26%. Another step down will happen in 2021, to 22%, and then the credit will be gone in 2022. The state needs to consider the full impact this step down will have to the industry (70% of which is locally owned and operated), state's energy goals, and the people of Hawaii. Unless there are significant changes to Hawaii's clean energy market, such as more well-structured tax credit, better

interconnection programs that provide greater values streams for consumers, or ideally both, the outlook for the state's energy goals is grim.

That being said, we appreciate the legislature's attempts to include technologies like energy storage into the existing tax credit, and we welcome the discussion on the merits of this inclusion. For several years, the HSEA has supported various measures to fully value the benefits of energy storage technologies and we believe that it is consistent with state's energy goals on several levels.

To reiterate above, the HSEA supports a tax credit for energy storage systems but we recommend that one of the following changes be made to this particular bill in light of the circumstances above:

1. **We suggest extending the sunset date to 2045.** The current renewable portfolio standard will be met in 2045, and continued development of behind-the-meter resources like rooftop PV are an integral part of meeting this goal. Thus, it is consistent to align the sunset of the credit with the point at which we will meet 100% renewable sales. In practice, this would mean decreasing the tax credit by 1.5%/year for 25 years beginning in 2020.
2. **We suggest removing the "grid-connected" provision on page 20, lines 1-4.** Although the HSEA discourages things like "grid defection", many systems built for off-grid also meet the same technological qualifications that grid connected systems have. Thus, in the future it could be possible that an off-grid customer may want to reconnect to the grid and allow their system to be utilized by any future tariff that creates a value stream for them and the broader electric grid. Additionally, many neighbor island developers build off-grid systems for customers in which it is cost-prohibitive for them to pay for electric utility access, i.e. paying for a utility pole to be built to their property. Removing access to this credit for off-grid customers means could mean forcing them into paying for electric service that they otherwise would not have needed.
3. Leave the existing renewable tax credit alone and create a **stand-alone energy storage tax credit** with a step down structure, geared towards serving lower and middle income consumers.

The HSEA **supports the intent of HB 202**, but we ask the legislature to defer this measure unless one of the above actions are taken.

Thank you for the opportunity to testify.

LATE

HB-202
Submitted on: 1/22/2020 5:06:07 PM
Testimony for EEP on 1/23/2020 9:00:00 AM

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

Comments:

Dear Chair Lowen, Vice Chair Wildberger, and members:

I strongly support HB 202. Solar water heaters save homeowners and renters money, use an established technology we know how to do well, and impact the Climate Crisis in a simple, reliable way that is ideal for sunny Hawaii.

I ask you to reject self-serving, spurious arguments like, "People should have 'a choice' of a gas water heater," and "Solar water heaters make affordable housing unaffordable."

Very few homeowners actually have a choice of water heater type. Only the developers have that choice. Once they choose a type of water heater, and build 10 homes, or 500, people who buy or rent the homes are stuck with what the developers chose, usually meaning eternal gas bills. Developers usually choose gas, because it's cheaper for them when they build. Period.

If actually given a choice, and all the facts, the vast majority of homeowners and renters would choose renewable water heating, because it's far cheaper in the long term. Gas water heaters cost homeowners less only during the first four to five years. After that, solar is free, month after month after month.

As to affordable housing, solar water will indeed increase costs for a few years while the installation is being paid off, but then that housing will become even more affordable, because there will never be a gas bill.

Also, letting anyone choose natural gas affects the entire planet. No one has a right to "choose" for the rest of us. It's like "choosing" to blast heavy metal music at 3 a.m., or "choosing" to drive on the left. Hawaii has decided that we should give up the choice of plastic bags, because that tiny imposition on individuals benefits us significantly as a society. And gas is far more important.

Finally, this bill does nothing to cut jobs. It applies only to new buildings. Gas industry employees will keep their jobs serving every existing gas customer. But like coal, the gas industry is going away. Hawaii Gas should transition to renewables and retrain its staff for the jobs of the future.

Whether you support items HB 202 translates to this: will you help renters and homeowners to save money in the long term, and help fight the Climate Crisis, or will you give Hawaii Gas more profits, and approval to burn more fossil fuels than they already do?

Nanea Lo

LATE

HB-202
Submitted on: 1/22/2020 5:12:17 PM
Testimony for EEP on 1/23/2020 9:00:00 AM

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

Comments:

Dear Chair Lowen, Vice Chair Wildberger, and members:

I strongly support HB 202. Solar water heaters save homeowners and renters money, use an established technology we know how to do well, and impact the Climate Crisis in a simple, reliable way that is ideal for sunny Hawaii.

I ask you to reject self-serving, spurious arguments like, "People should have 'a choice' of a gas water heater," and "Solar water heaters make affordable housing unaffordable."

Very few homeowners actually have a choice of water heater type. Only the developers have that choice. Once they choose a type of water heater, and build 10 homes, or 500, people who buy or rent the homes are stuck with what the developers chose, usually meaning eternal gas bills. Developers usually choose gas, because it's cheaper for them when they build. Period.

If actually given a choice, and all the facts, the vast majority of homeowners and renters would choose renewable water heating, because it's far cheaper in the long term. Gas water heaters cost homeowners less only during the first four to five years. After that, solar is free, month after month after month.

As to affordable housing, solar water will indeed increase costs for a few years while the installation is being paid off, but then that housing will become even more affordable, because there will never be a gas bill.

Also, letting anyone choose natural gas affects the entire planet. No one has a right to "choose" for the rest of us. It's like "choosing" to blast heavy metal music at 3 a.m., or "choosing" to drive on the left. Hawaii has decided that we should give up the choice of plastic bags, because that tiny imposition on individuals benefits us significantly as a society. And gas is far more important.

Finally, this bill does nothing to cut jobs. It applies only to new buildings. Gas industry employees will keep their jobs serving every existing gas customer. But like coal, the gas industry is going away. Hawaii Gas should transition to renewables and retrain its staff for the jobs of the future.

Whether you support items HB 202 translates to this: will you help renters and homeowners to save money in the long term, and help fight the Climate Crisis, or will you give Hawaii Gas more profits, and approval to burn more fossil fuels than they already do?

Jonathan Boyne

HB-202
Submitted on: 1/22/2020 6:07:21 PM
Testimony for EEP on 1/23/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
David Dinner	Individual	Support	No

Comments:

To: The House Committee on Energy & Environmental Protection
From: Lynn Aaberg
Date: Thursday, January 23, 2020, 9:00 am

In strong support of HB 202

Dear Chair Lowen, Vice Chair Wildberger, and members:

I am in strong support of HB 202 and urge you to pass it. Solar water heaters save money and carbon! In Hawai'i we are blessed with warmth and sunshine, and it makes sense to support this.

I have seen letters sent from the Gas Company to set up their argument as if people would lose their "freedom of choice" if solar water heaters were required on new construction. In this time of extreme climate crisis, please do not be swayed by these arguments. Please do not grant "freedom" to make the climate crisis worse!

Support solar water! Hawai'i can and should be leaders in climate crisis solutions!

Sincerely,

Lynn Aaberg

HB-202
Submitted on: 1/22/2020 8:28:00 PM
Testimony for EEP on 1/23/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Eric Micha'el Leventhal	Individual	Support	No

Comments:

To: The House Committee on Energy & Environmental Protection
From: Eric Micha'el Leventhal
Date: Thursday, January 23, 2020

In strong support of HB 202

Dear Chair Lowen, Vice Chair Wildberger, and members:

I strongly support HB 202. Solar water heaters save homeowners and renters money, use an established technology we know how to do well, and impact the Climate Crisis in a simple, reliable way that is ideal for sunny Hawaii.

I ask you to reject self-serving, spurious arguments like, "People should have 'a choice' of a gas water heater," and "Solar water heaters make affordable housing unaffordable."

Very few homeowners actually have a choice of water heater type. Only the developers have that choice. Once they choose a type of water heater, and build 10 homes, or 500, people who buy or rent the homes are stuck with what the developers chose, usually meaning eternal gas bills. Developers usually choose gas, because it's cheaper for them when they build. Period.

If actually given a choice, and all the facts, the vast majority of homeowners and renters would choose renewable water heating, because it's far cheaper in the long term. Gas water heaters cost homeowners less only during the first four to five years. After that, solar is free, month after month after month.

As to affordable housing, solar water will indeed increase costs for a few years while the installation is being paid off, but then that housing will become even more affordable, because there will never be a gas bill.

Also, letting anyone choose natural gas affects the entire planet. No one has a right to "choose" for the rest of us. It's like "choosing" to blast heavy metal music at 3 a.m., or

"choosing" to drive on the left. Hawaii has decided that we should give up the choice of plastic bags, because that tiny imposition on individuals benefits us significantly as a society. And gas is far more important.

Finally, this bill does nothing to cut jobs. It applies only to new buildings. Gas industry employees will keep their jobs serving every existing gas customer. But like coal, the gas industry is going away. Hawaii Gas should transition to renewables and retrain its staff for the jobs of the future.

Whether you support items HB 202 translates to this: will you help renters and homeowners to save money in the long term, and help fight the Climate Crisis, or will you give Hawaii Gas more profits, and approval to burn more fossil fuels than they already do?

Thank you for doing the right thing for our community!

~ Eric Micha'el Leventhal

HB-202
Submitted on: 1/22/2020 9:09:44 PM
Testimony for EEP on 1/23/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Rene Robertson	Individual	Support	No

Comments:

To: The House Committee on Energy & Environmental Protection
From: René Robertson
Date: Thursday, January 23, 2020, 9:00 am

In strong support of HB 202

Dear Chair Lowen, Vice Chair Wildberger, and members:

I strongly support HB 202. Solar water heaters save homeowners and renters money, use an established technology we know how to do well, and impact the Climate Crisis in a simple, reliable way that is ideal for sunny Hawaii.

I ask you to reject self-serving, spurious arguments like, "People should have 'a choice' of a gas water heater," and "Solar water heaters make affordable housing unaffordable."

Very few homeowners actually have a choice of water heater type. Only the developers have that choice. Once they choose a type of water heater, and build 10 homes, or 500, people who buy or rent the homes are stuck with what the developers chose, usually meaning eternal gas bills. Developers usually choose gas, because it's cheaper for them when they build. Period.

If actually given a choice, and all the facts, the vast majority of homeowners and renters would choose renewable water heating, because it's far cheaper in the long term. Gas water heaters cost homeowners less only during the first four to five years. After that, solar is free, month after month after month.

As to affordable housing, solar water will indeed increase costs for a few years while the installation is being paid off, but then that housing will become even more affordable, because there will never be a gas bill.

Also, letting anyone choose natural gas affects the entire planet. No one has a right to "choose" for the rest of us. It's like "choosing" to blast heavy metal music at 3 a.m., or

"choosing" to drive on the left. Hawaii has decided that we should give up the choice of plastic bags, because that tiny imposition on individuals benefits us significantly as a society. And gas is far more important.

Finally, this bill does nothing to cut jobs. It applies only to new buildings. Gas industry employees will keep their jobs serving every existing gas customer. But like coal, the gas industry is going away. Hawaii Gas should transition to renewables and retrain its staff for the jobs of the future.

Whether you support items HB 202 translates to this: will you help renters and homeowners to save money in the long term, and help fight the Climate Crisis, or will you give Hawaii Gas more profits, and approval to burn more fossil fuels than they already do?

René Robertson

HB-202
Submitted on: 1/23/2020 12:39:31 AM
Testimony for EEP on 1/23/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Sherry Pollack	Individual	Support	No

Comments:

To: The House Committee on Energy & Environmental Protection
From: Sherry Pollack
Date: Thursday, January 23, 2020, 9:00 am

Dear Chair Lowen, Vice Chair Wildberger, and members:

I strongly support HB 202.

With regard to solar water heating systems in general, I would like to offer further comment.

Solar water heaters save homeowners and renters money, use an established technology we know how to do well, and impact the Climate Crisis in a simple, reliable way that is ideal for sunny Hawaii.

I ask you to reject self-serving, false narratives that have been put forward on this issue, such as "People should have 'a choice' of a gas water heater," and "Solar water heaters make affordable housing unaffordable."

Very few homeowners actually have a choice of water heater type. Only the developers have that choice. The people who buy or rent the homes are stuck with what the developers chose, usually meaning eternal gas bills. Developers usually choose gas, because it's cheaper for them when they build. Period.

If actually given a choice, and all the facts, the vast majority of homeowners and renters would choose renewable water heating, because it's far cheaper in the long term. Gas water heaters cost homeowners less only during the first four to five years. After that, solar is free, month after month after month.

As to affordable housing, solar water will indeed increase costs for a few years while the installation is being paid off, but then that housing will become even more affordable, because there will never be a gas bill.

Finally, it is important to remember that this bill does nothing to cut jobs. It applies only to new buildings. Gas industry employees will keep their jobs serving every existing gas

customer. But like coal, the gas industry is going away. Hawaii Gas should transition to renewables and retrain its staff for the jobs of the future.

Solar water heaters will help renters and homeowners to save money in the long term, and help fight the Climate Crisis.

Thank you for this opportunity to testify.

Sherry Pollack