

**TESTIMONY BEFORE THE JOINT SENATE COMMITTEES ON
HOUSING
&
COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM**

S.B. 1289

Relating to Rooftop Solar Installation

Wednesday, February 13, 2019
3:15 PM, Agenda Item #2
State Capitol, Conference Room 414

Kaiulani Shinsato
Director, Distributed Energy Resources
Hawaiian Electric Company, Inc.

Dear Chair Chang and Chair Wakai, Vice Chair Kanuha, and Vice Chair Taniguchi, and Members of the Committees,

My name is Kaiulani Shinsato and I am testifying on behalf of Hawaiian Electric Company, Inc. and its subsidiaries, Hawai'i Electric Light Company, Inc. and Maui Electric Company, Limited (collectively, the "Hawaiian Electric Companies"). The Hawaiian Electric Companies provide the following **comments** regarding S.B. 1289, Relating to Rooftop Solar Installation.

The Hawaiian Electric Companies support the intent of S.B. 1289, which encourages the adoption of rooftop solar in the State. However, the bill may incentivize exporting rooftop solar systems in areas where there is already high rooftop solar concentration (e.g., on the West side of O'ahu), thus possibly resulting in costly upgrades and/or interconnection studies to ensure that these additional systems can be safely interconnected. In this regard, the bill is at odds with the Hawaiian Electric Companies' Integrated Grid Planning ("IGP") process, which is already underway and is

the subject of an open proceeding before the Hawai'i Public Utilities Commission. The IGP planning process is centered on identifying grid needs and services first, and then obtaining them cost-effectively through procurements and/or programs that could be location specific. Energy and grid services from these systems should be taken and compensated based on grid needs, defined by the utility and approved by the Public Utilities Commission through the IGP process so that these systems benefit all customers and do not have unintended adverse consequences.

With respect to customer clean energy resources, our objective is to ensure that these resources are adopted in a way that facilitates a cost-effective path to 100% clean energy for our State, which means we must look out for all customers, not only those with rooftop solar systems. Customer resources are an important part of our strategy to 100% clean energy by 2045, but only if they are integrated in coordination with the rest of the electric grid and aligned with our resource plans that holistically consider all customers. Policy that does not consider alignment with the complex resource plans that have been developed by the Companies, vetted by many experts, regulators, and stakeholders over many years may unintentionally impede our State's path to 100% clean energy.

Thank you for this opportunity to testify.

SB-1289

Submitted on: 2/12/2019 10:07:06 AM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jeff Lum	Individual	Support	No

Comments:

I STRONGLY SUPPORT SB 1289. This measure requires a rooftop solar energy generation system to be installed on all new single-family residential dwellings that are not granted a variance beginning on 1/1/2022.

Solar energy technology, such as solar photovoltaic and solar hot water, are proven to help people save money on their energy bill, reduce electrical demand and the use of fossil fuels, and combat climate change. With some of the highest amount of solar energy installations per capita, bills like SB1289 are well in line with Hawaii's renewable energy goals and should be passed immediately.

Hawaii still gets over 80% of its energy from dirty fossil fuels, and consumers are paying the price through high energy bills and carbon emissions. In the last 20 years, the price of solar energy has dropped to all time lows and it gets more affordable every single day. Rolling the cost of a solar system into the price of a new home makes it even more affordable. Similar policy enacted last year in California found that a homeowner would actually save almost \$20,000 in energy and maintenance costs over the life of a 30 year mortgage.

Hawaii should be a leader in clean energy policy, and bills like this make us one.

Thank you for supporting clean solar energy and giving me the opportunity to testify.

SB-1289

Submitted on: 2/8/2019 5:06:48 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Mio Chee	Individual	Support	No

Comments:

SB-1289

Submitted on: 2/9/2019 4:34:45 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Robert Edmondson	Testifying for 350 Hawaii	Support	No

Comments:

Aloha, I strongly support SB1289. With the abundant sun we are blessed with in Hawaii, the move to solar-ready homes is a no-brainer. Consumers with rooftop solar slash their energy use and enjoy substantial savings on their energy bills. Last year, California passed its own bill requiring solar power on all new homes. We need to catch up. Solar-ready homes are the future for Hawaii, a future we must begin now if we are to mitigate the devastating effects of global warming. Please pass SB1289 and move us to a clean, renewable energy economy and future. Science tells us we must transition NOW. Our grandchildren and great-grandchildren are counting on us! Mahalo

SB-1289

Submitted on: 2/10/2019 1:58:22 PM

Testimony for EET on 2/13/2019 3:15:00 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 SB1289. With the abundant sun we are blessed with in Hawaii, the move to solar-ready homes is a no-brainer. Consumers with rooftop solar slash their energy use and enjoy substantial savings on their energy bills. Last year, California passed its own bill requiring solar power on all new homes. We need to catch up. Solar-ready homes are the future for Hawaii, a future we must begin now if we are to mitigate the devastating effects of global warming. Please pass SB1289 and move us to a clean, renewable energy economy and future. Science tells us we must transition NOW. Our grandchildren and great-grandchildren are counting on us!

In addition, please make progress to require local utility companies to pay for all locally generated power contributed to the grid. Enough of "net metering".

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

www.WeAreOne.cc



**TESTIMONY TO THE SENATE COMMITTEES ON HOUSING, AND ENERGY, ECONOMIC
DEVELOPMENT, AND TOURISM
State Capitol, Conference Room 414
415 South Beretania Street
3:15 PM**

February 13, 2019

RE: SENATE BILL NO. 1289, RELATING TO ROOFTOP SOLAR INSTALLATION

Chairs Chang and Wakai, Vice Chairs Kanuha and Taniguchi, and members of the committees:

My name is Gladys Quinto-Marrone, CEO of the Building Industry Association of Hawaii (BIA-Hawaii). Chartered in 1955, the Building Industry Association of Hawaii is a professional trade organization affiliated with the National Association of Home Builders, representing the building industry and its associates. BIA-Hawaii takes a leadership role in unifying and promoting the interests of the industry to enhance the quality of life for the people of Hawaii. Our members build the communities we all call home.

BIA-Hawaii is **strongly opposed** to S.B. 1289, which proposes to MANDATE a rooftop solar energy generation system (i.e photovoltaic) to be installed on all new single-family residential dwellings that are not granted a variance beginning on 1/1/2022.

Previously, the Legislature mandated the installation of solar water heaters on all new single family residential dwellings in Hawaii. Prior to the mandate, the state had provided tax credits to homeowners who purchased a solar water heating system. The utility companies had lists of solar water heater installation companies who were familiar with the tax credit program. This was the incentive to attract existing homeowners to install solar water heating systems. Once the mandate law was passed, the tax credits were eliminated and there was no incentive for existing homeowners to install a solar water heating system.

If the goal is to move the state to be less dependent on fossil fuels, we should learn from past mistakes and use incentives rather than mandates, letting consumers make their own choices.

We strongly oppose S.B. 1289 and appreciate the opportunity to express our views on the matter.

SB-1289

Submitted on: 2/12/2019 10:03:02 AM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Kelsey Haley	Individual	Support	No

Comments:

Aloha Chair Chang, Chair Wakai, and Members of the Committees,

I STRONGLY SUPPORT SB 1289. *This measure requires a rooftop solar energy generation system to be installed on all new single-family residential dwellings that are not granted a variance beginning on 1/1/2022.*

Solar energy technology, such as solar photovoltaic and solar hot water, are proven to help people save money on their energy bill, reduce electrical demand and the use of fossil fuels, and combat climate change. With some of the highest amount of solar energy installations per capita, bills like SB1289 are well in line with Hawaii's renewable energy goals and should be passed immediately.

Hawaii still gets over 80% of its energy from dirty fossil fuels, and consumers are paying the price through high energy bills and carbon emissions. In the last 20 years, the price of solar energy has dropped to all time lows and it gets more affordable every single day. Rolling the cost of a solar system into the price of a new home makes it even more affordable. Similar policy enacted last year in California found that a homeowner would actually save almost \$20,000 in energy and maintenance costs over the life of a 30 year mortgage.

Hawaii should be a leader in clean energy policy, and bills like this make us one.

Thank you for supporting clean solar energy and giving me the opportunity to testify.

February 13, 2019

The Honorable Stanley Chang, Chair

Senate Committee on Housing

The Honorable Glenn Wakai, Chair

Senate Committee on Energy, Economic Development and Tourism

State Capitol, Room 414

Honolulu, Hawaii 96813

RE: Senate Bill 1289, Relating to Rooftop Solar Installation

HEARING: Wednesday, February 13, 2019, at 3:15p.m.

Aloha Chair Chang, Chair Wakai and Members of the Joint Committees,

I am Ken Hiraki Government Affairs Director, testifying on behalf of the Hawai'i Association of REALTORS® (“HAR”), the voice of real estate in Hawai'i, and its over 9,500 members. HAR **strongly opposes** Senate Bill 1289 which requires a rooftop solar energy generation system to be installed on all new single-family residential dwellings that are not granted a variance beginning on January 1, 2022.

Hawai'i REALTORS® believe that rooftop solar energy generation systems provide great benefits to a homeowner. However, installation of solar energy generation systems can average \$30,000 or more depending on the single-family home. This expense will be added into the already high cost of housing in Hawai'i, placing homeownership even further out of reach for many of Hawaii's residents.

As such, HAR believes that homeowners should be encouraged to install rooftop solar energy generation systems, but it should not be mandated.

Mahalo for the opportunity to testify.

SB-1289

Submitted on: 2/8/2019 5:40:55 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
L.M. Holmes	Individual	Support	No

Comments:

SB-1289

Submitted on: 2/9/2019 3:55:16 PM

Testimony for EET on 2/13/2019 3:15:00 PM

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

Comments:

I strongly support SB1289. With the abundant sun we are blessed with in Hawaii, the move to solar-ready homes is a no-brainer. Consumers with rooftop solar slash their energy use and enjoy substantial savings on their energy bills. Last year, California passed its own bill requiring solar power on all new homes. We need to catch up. Solar-ready homes are the future for Hawaii, a future we must begin now if we are to mitigate the devastating effects of global warming. Please pass SB1289 and move us to a clean, renewable energy economy and future. Science tells us we must transition NOW. Our grandchildren and great-grandchildren are counting on us!

SB-1289

Submitted on: 2/9/2019 4:08:04 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Laura Gray	Individual	Support	No

Comments:

This idea of all new construction having rooftop solar should be a no brainer and should already be in effect. Gas demand is not the answer, as solar is a much greener solution and is the easiest way to reduce our carbon footprint. We are going to have to make a radical shift if our children and grandchildren are going to survive. Mahalo, Laura Gray R.N.

SB-1289

Submitted on: 2/9/2019 6:52:52 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
donald erway	Individual	Support	No

Comments:

SB-1289

Submitted on: 2/9/2019 7:31:57 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
anne zellinger	Individual	Support	No

Comments:

SB-1289

Submitted on: 2/9/2019 8:01:00 PM

Testimony for EET on 2/13/2019 3:15:00 PM

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

Comments:

I strongly support SB1289. With the abundant sun we are blessed with in Hawaii, the move to solar-ready homes is a no-brainer. Consumers with rooftop solar slash their energy use and enjoy substantial savings on their energy bills. Last year, California passed its own bill requiring solar power on all new homes. We need to catch up. Solar-ready homes are the future for Hawaii, a future we must begin now if we are to mitigate the devastating effects of global warming. Please pass SB1289 and move us to a clean, renewable energy economy and future. Science tells us we must transition NOW. Our grandchildren and great-grandchildren are counting on us!

Carolynn Bell-Tuttle

SB-1289

Submitted on: 2/9/2019 8:38:25 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jeremy Garrett	Individual	Support	No

Comments:

I strongly support passage of this legislation. It will support the state's continued transition away from fossil fuels and towards 100% renewable energy.

Thank you.

SB-1289

Submitted on: 2/10/2019 8:08:42 AM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Robert Culbertson	Individual	Support	No

Comments:

SB-1289

Submitted on: 2/10/2019 11:17:11 AM

Testimony for EET on 2/13/2019 3:15:00 PM

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

Comments:

I STRONGLY support SB1289. With the abundant sun we are blessed with in Hawaii, the move to solar-ready homes is a no-brainer. Consumers with rooftop solar slash their energy use and enjoy substantial savings on their energy bills. Last year, California passed its own bill requiring solar power on all new homes. We need to catch up. Solar-ready homes are the future for Hawaii, a future we must begin now if we are to mitigate the devastating effects of global warming. Please pass SB1289 and move us to a clean, renewable energy economy and future. Science tells us we must transition NOW. Our grandchildren and great-grandchildren are counting on us!

SB-1289

Submitted on: 2/10/2019 11:52:10 AM

Testimony for EET on 2/13/2019 3:15:00 PM

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

Comments:

Mahalo for allowing me to submit testimony on this bill that will help us meet Honolulu's zero emission goals.

I strongly support SB1289. With the abundant sun we are blessed with in Hawaii, the move to solar-ready homes is a no-brainer. Consumers with rooftop solar slash their energy use and enjoy substantial savings on their energy bills. Last year, California passed its own bill requiring solar power on all new homes. We need to catch up. Solar-ready homes are the future for Hawaii, a future we must begin now if we are to mitigate the devastating effects of global warming. Please pass SB1289 and move us to a clean, renewable energy economy and future. Science tells us we must transition NOW. Our grandchildren and great-grandchildren are counting on us!

Aloha

Janet

SB-1289

Submitted on: 2/10/2019 11:57:53 AM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Stacy K. Tang	Individual	Comments	No

Comments:

To The Responsible Committee:

I strongly support SB1289. With Hawaii's abundant sunshine, the move to solar ready homes is a NO-BRAINER. California passed its own bill LAST YEAR, requiring solar power on all new homes. Hawaii should be way beyond California. We live on a small chain of islands in the middle of the Pacific Ocean. We don't have the luxury of a neighboring state to help us in times of need. WE SHOULD BE AIMING FOR COMPLETE SELF-RELIANCE.

This bill is WAY PAST DUE. Hawaii needs to be brave enough to make the tough decisions the other states are hesitant to make. Climate change effects the whole planet, but for us, oceans rising is devastating. WE MUST ACT NOW.

Please pass SB1289 and move us to a clean, renewable energy economy and future.

Thank you,

Stacy Tang

SB-1289

Submitted on: 2/10/2019 2:11:29 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Dain Christensen	Individual	Support	No

Comments:

To whom it may concern,

Living on islands, locals recognize space is limited and allowing the coexistence of Hawaii's native flora and fauna is a priority. Protecting reefs and our oceans is a priority. Locally produced food is a priority. Rooftop solar is the best way to act on emissions that negatively impact the atmosphere and oceans. Here is why:

- 1) Buildings and houses have already been built and that space has been used. Roofs, an impervious surface, prevent the recharging of aquifers and contribute to sediment runoff that is smothering our reefs. This cannot be undone but we can use that space more efficiently by producing renewable energy. That energy will reduce the carbon dioxide in atmosphere that eventually mixes with our oceans, making them more acidic.
- 2) Our cities and homes can be Hawaii's solar fields. This is an efficient use of space. If land is used exclusively for solar farms then that is less land for agriculture or native wildlife. There is a lot of research regarding how agriculture and wildlife can coexist. As a biocontrol for rodents, the pueo is just one example. This helps Hawaii by protecting its unique biodiversity, natural beauty and helps increase the State's food production and food security.

Lets be smart with our limited space. Thank you for your time.

Dain Leroy Christensen

SB-1289

Submitted on: 2/10/2019 3:20:46 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Joan Gannon	Individual	Support	No

Comments:

To:EET/HOU Committees

From: joan Gannon, voter, resident West Hawaii

Re: SB1289 I strongly support SB1289. With the amount of sun we are blessed with in Hawaii, the move to solar ready homes is a no brained. Consumers with rooftop solar slash their energy use and enjoy substantial savings on their energy bill. Solar ready homes are the future for Hawaii, a future we must begin now if we are to midigate the devastating effects of global warming. Please pass SB1289 and move us to a clean , renewable energy economy and future. Science tells us we must transition NOW. Our Grandchildren and great grandchildren are counting on us.

Thank you and please do your best

SB-1289

Submitted on: 2/10/2019 3:57:22 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Charles K. Burrows	Individual	Support	No

Comments:

I strongly support SB1289 because with the abundant sunshine in Hawaii and to reduce the GHG emissions towards Hawai'i being 100% Carbon Free by 2030 this is a no brainer.

Charles K. Burrows

SB-1289

Submitted on: 2/10/2019 9:12:31 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Caroline Kunitake	Individual	Support	No

Comments:

Aloha,

I strongly support SB1289. With the abundant sun we are blessed with in Hawaii, the move to solar-ready homes is a no-brainer. Consumers with rooftop solar slash their energy use and enjoy substantial savings on their energy bills. Last year, California passed its own bill requiring solar power on all new homes. We need to catch up. Solar-ready homes are the future for Hawaii, a future we must begin now if we are to mitigate the devastating effects of global warming. Please pass SB1289 and move us to a clean, renewable energy economy and future.

Mahalo,

Caroline Kunitake

SB-1289

Submitted on: 2/11/2019 9:43:55 AM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Dale Jensen	Individual	Support	No

Comments:

I strongly support SB1289. With the abundant sun we are blessed with in Hawaii, the move to solar-ready homes is a no-brainer. Consumers with rooftop solar slash their energy use and enjoy substantial savings on their energy bills. Payback on such solar hot water systems is very short indeed, so there is no reason to defer action on this measure. Solar-ready homes are the future for Hawaii, a future we must begin now if we are to mitigate the devastating effects of global warming. Please pass SB1289 and move us to a clean, renewable energy economy and future. Science tells us we must transition NOW. Our grandchildren and great-grandchildren are counting on us!

Sincerely, Dale Jensen, Professional Engineer, Kailua

SB-1289

Submitted on: 2/11/2019 10:26:32 AM

Testimony for EET on 2/13/2019 3:15:00 PM

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

Comments:

If the state is going to meet it's energy objectives, roof top solar must be part of the plan. If our residents are going to be able to afford to live in Hawaii roof top solar and tax incentives must be part of the plan. Let's do this!

SB-1289

Submitted on: 2/11/2019 11:00:02 AM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Laura Groves	Individual	Support	No

Comments:

Aloha Chair Chang, Chair Wakai, and Members of the Committees,

I strongly support SB 1289, which makes solar a standard feature on all new homes. I installed 42 panels on my home in Washington state, and will do the same if I can afford to buy a house here. With the highest electrical rates in country and the impacts of climate change already being felt in Hawaii, every home in Hawaii should be using the sun.

In enacting a similar policy, California calculated that rooftop solar on all new homes would save residents an average of \$40 per month. This number is likely higher here in Hawaii, where the average resident pays the highest electrical rates in the country. I was saving over \$200 a month on my large home in Washington state.

Although environmentally friendly rooftop solar would save homeowners money, the majority of new homes in sunny Hawaii use fossil fuels to power their home, despite the ease of installing solar while the house is under construction. SB 1289 is a common sense policy requiring developers to have the long-term interest of new home buyers in mind.

Thank you for everything you do to support solar in Hawaii!

Mahalo,

Laura Groves

SB-1289

Submitted on: 2/11/2019 11:02:52 AM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
melissa wheeler	Individual	Support	No

Comments:

Aloha Chair Chang, Chair Wakai, and Members of the Committees,

I strongly support SB 1289, which makes solar a standard feature on all new homes. With the highest electrical rates in country and the impacts of climate change already being felt in Hawaii, every home in Hawaii should be using the sun.

In enacting a similar policy, California calculated that rooftop solar on all new homes would save residents an average of \$40 per month. This number is likely higher here in Hawaii, where the average resident pays the highest electrical rates in the country.

Although environmentally friendly rooftop solar would save homeowners money, the majority of new homes in sunny Hawaii use fossil fuels to power their home, despite the ease of installing solar while the house is under construction. SB 1289 is a common sense policy requiring developers to have the long-term interest of new home buyers in mind.

SB-1289

Submitted on: 2/11/2019 11:05:38 AM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Stewart Wiggers	Individual	Support	No

Comments:

Solar Energy...Tapping into Mother Nature!...It's such a natural resource for Hawaii Nei!...This is our big chance, don't let this opening slip by!

Thanks,

Stewart Wiggers

SB-1289

Submitted on: 2/11/2019 11:12:08 AM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jordan Moniuszko	Individual	Support	No

Comments:

I strongly support this measure. Aloha

SB-1289

Submitted on: 2/11/2019 11:32:58 AM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
M. Todd Cox	Individual	Support	No

Comments:

Aloha Chairs and Members of the Committees,

Special Thank you to Chair Wakai for sponsoring such an integral bill for us all. I also strongly support SB 1289, to make solar a standard feature on all new homes. I have solar now, but it was/is extremely expensive not being covered within the original mortgage. Even with Green Loans, it is difficult to afford. If I could have made it part of the purchase...I would have.

Additionally, I know/believe it is better for the environment, and reduces requirements on our fuel burning electric plants. So with that....I'm all about Hawaii using the sun to harness our individual energy.

To me, SB 1289 is an aloha common sense policy for citizens, residents of Hawaii, and the aina.

Mahalo,

Todd Cox

SB-1289

Submitted on: 2/11/2019 12:19:39 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Annette Bunting	Individual	Support	No

Comments:

Aloha Chair Chang, Chair Wakai, and Members of the Committees,

I strongly support SB 1289, which makes solar a standard feature on all new homes. With the highest electrical rates in country and the impacts of climate change already being felt in Hawaii, every home in Hawaii should be using the sun.

In enacting a similar policy, California calculated that rooftop solar on all new homes would save residents an average of \$40 per month. This number is likely higher here in Hawaii, where the average resident pays the highest electrical rates in the country.

Although environmentally friendly rooftop solar would save homeowners money, the majority of new homes in sunny Hawaii use fossil fuels to power their home, despite the ease of installing solar while the house is under construction. SB 1289 is a common sense policy requiring developers to have the long-term interest of new home buyers in mind.

Thank you for your attention in this matter.

Annette Bunting

SB-1289

Submitted on: 2/11/2019 1:12:26 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jon Burford	Individual	Support	No

Comments:

Aloha Chair Chang, Chair Wakai, and Members of the Committees,

I strongly support SB 1289, which makes solar a standard feature on all new homes. With the highest electrical rates in country and the impacts of climate change already being felt in Hawaii, every home in Hawaii should be using the sun.

In enacting a similar policy, California calculated that rooftop solar on all new homes would save residents an average of \$40 per month. This number is likely higher here in Hawaii, where the average resident pays the highest electrical rates in the country.

Although environmentally friendly rooftop solar would save homeowners money, the majority of new homes in sunny Hawaii use fossil fuels to power their home, despite the ease of installing solar while the house is under construction. SB 1289 is a common sense policy requiring developers to have the long-term interest of new home buyers in mind.

SB-1289

Submitted on: 2/11/2019 1:40:53 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Charles WL Moore	Individual	Support	No

Comments:

Aloha Chair Chang, Chair Wakai, and Members of the Committees,

I strongly support SB 1289, which makes solar a standard feature on all new homes. With the highest electrical rates in country and the impacts of climate change already being felt in Hawaii, every home in Hawaii should be using the sun.

In enacting a similar policy, California calculated that rooftop solar on all new homes would save residents an average of \$40 per month. This number is likely higher here in Hawaii, where the average resident pays the highest electrical rates in the country.

Although environmentally friendly rooftop solar would save homeowners money, the majority of new homes in sunny Hawaii use fossil fuels to power their home, despite the ease of installing solar while the house is under construction. SB 1289 is a common sense policy requiring developers to have the long-term interest of new home buyers in mind.

Thank you for everything you do to support solar in Hawaii!

SB-1289

Submitted on: 2/11/2019 2:39:49 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Norman K Sato	Individual	Support	No

Comments:

I strongly support SB1289. Relying on homeowners to voluntarily install rooftop solar PV panels is not the most dependable method because cost becomes a negative factor. Installed as part of purchasing a new home removes this option, benefitting the homeowner and helping the state reach it's goal of 100% renewable energy.

SB-1289

Submitted on: 2/11/2019 7:01:18 PM

Testimony for EET on 2/13/2019 3:15:00 PM

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

Comments:



To: The Senate Committee on Energy, Economic Development, and Tourism
and
The Senate Committee on Housing
From: Sherry Pollack, 350Hawaii.org
Date: Wednesday, 2/13/19

In strong support of SB1289

Aloha Chairs Wakai and Chang, Vice Chairs Taniguchi and Kanuha, and members of the EET and HOU committees,

I am Co-Founder of the Hawaii chapter of 350.org, the largest international organization dedicated to fighting climate change. On behalf of our 6,000 members and supporters, 350Hawaii.org **strongly supports SB1289**.

With the highest electrical rates in the country and the impacts of climate change already being felt, every home in Hawaii should be using the sun. This is a common-sense policy. Hawaii is blessed with abundant sun and the move to solar-ready homes is really a no-brainer. Developers who care about our communities should have the long-term interests of new home buyers in mind.

Consumers with rooftop solar slash their energy use and enjoy substantial savings on their energy bills. Last year, California passed its own bill requiring solar power on all new homes. We need to catch up.

Solar-ready homes are the future for Hawaii, a future we must begin now to mitigate the devastating effects of global warming. The UN IPCC report makes clear we have 10 years to drastically reduce greenhouse gas emissions to avoid Climate Hell. Requiring all new homes to be solar ready will make a significant difference in our efforts to achieve the reductions necessary. And if our current grid is not capable, we need to change our model. No more excuses.

Greta Thunberg, a 15-year-old climate activist, who called on world leaders at the UN Climate Change Conference to do more, stated "You say you love your children above all else and yet you are stealing their future in front of their very eyes. Until you start focusing on what needs to be done rather than what is politically possible, there is no hope."

Please pass SB1289 and move us to a clean, renewable energy economy and future. Science tells us we must transition to NOW. Our grandchildren and great-grandchildren are counting on us!

Thank you for the opportunity to testify in **strong support** of this very important bill.
Sherry Pollack
Co-Founder, 350Hawaii.org

SB-1289

Submitted on: 2/11/2019 8:58:36 PM

Testimony for EET on 2/13/2019 3:15:00 PM

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

Comments:

Aloha Chair Chang, Chair Wakai, and Members of the Committees,

I strongly support SB 1289, which makes solar a standard feature on all new homes. With the highest electrical rates in country and the impacts of climate change already being felt in Hawaii, every home in Hawaii should be using the sun.

In enacting a similar policy, California calculated that rooftop solar on all new homes would save residents an average of \$40 per month. This number is likely higher here in Hawaii, where the average resident pays the highest electrical rates in the country.

Although environmentally friendly rooftop solar would save homeowners money, the majority of new homes in sunny Hawaii use fossil fuels to power their home, despite the ease of installing solar while the house is under construction. SB 1289 is a common sense policy requiring developers to have the long-term interest of new home buyers in mind.

Thank you for everything you do to support solar in Hawaii!

Mahalo,

SB-1289

Submitted on: 2/12/2019 10:41:59 AM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Andrew Christensen	Individual	Support	No

Comments:

Aloha Chair Chang, Chair Wakai, and Members of the Committees,

I STRONGLY SUPPORT SB 1289. This measure requires a rooftop solar energy generation system to be installed on all new single-family residential dwellings that are not granted a variance beginning on 1/1/2022.

Solar energy technology, such as solar photovoltaic and solar hot water, are proven to help people save money on their energy bill, reduce electrical demand and the use of fossil fuels, and combat climate change. With some of the highest amount of solar energy installations per capita, bills like SB1289 are well in line with Hawaii's renewable energy goals and should be passed immediately.

Hawaii still gets over 80% of its energy from dirty fossil fuels, and consumers are paying the price through high energy bills and carbon emissions. In the last 20 years, the price of solar energy has dropped to all time lows and it gets more affordable every single day. Rolling the cost of a solar system into the price of a new home makes it even more affordable. Similar policy enacted last year in California found that a homeowner would actually save almost \$20,000 in energy and maintenance costs over the life of a 30 year mortgage.

Hawaii should be a leader in clean energy policy, and bills like this make us one.

Thank you for supporting clean solar energy and giving me the opportunity to testify.

SB-1289

Submitted on: 2/12/2019 11:53:43 AM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Charles Chacko	Individual	Support	No

Comments:

Aloha Chair Chang, Chair Wakai, and Members of the Committees,

I STRONGLY SUPPORT SB 1289. *This measure requires a rooftop solar energy generation system to be installed on all new single-family residential dwellings that are not granted a variance beginning on 1/1/2022.*

Solar energy technology, such as solar photovoltaic and solar hot water, are proven to help people save money on their energy bill, reduce electrical demand and the use of fossil fuels, and combat climate change. With some of the highest amount of solar energy installations per capita, bills like SB1289 are well in line with Hawaii's renewable energy goals and should be passed immediately.

Hawaii still gets over 80% of its energy from dirty fossil fuels, and consumers are paying the price through high energy bills and carbon emissions. In the last 20 years, the price of solar energy has dropped to all time lows and it gets more affordable every single day. Rolling the cost of a solar system into the price of a new home makes it even more affordable. Similar policy enacted last year in California found that a homeowner would actually save almost \$20,000 in energy and maintenance costs over the life of a 30 year mortgage.

Hawaii should be a leader in clean energy policy, and bills like this make us one.

Thank you for supporting clean solar energy and giving me the opportunity to testify.

Charles Chacko

SB-1289

Submitted on: 2/12/2019 1:03:59 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Paul Egel	Individual	Support	No

Comments:

Please make diligent effort to get the acceptance of the bill SB1289, requiring a rooftop solar energy generation system to be installed on all new single-family residential dwellings



DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

DAVID Y. IGE
GOVERNOR

MIKE MCCARTNEY
DIRECTOR

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

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

LATE

Statement of
MIKE MCCARTNEY
Director

Department of Business, Economic Development, and Tourism
before the

**SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM
AND**

SENATE COMMITTEE ON HOUSING

Wednesday, February 13, 2019

3:15 PM

State Capitol, Conference Room #414

In consideration of

SB 1289

RELATING TO ROOFTOP SOLAR INSTALLATION.

Chairs Wakai and Chang, Vice Chairs Taniguchi and Kanuha, and members of the Committees.

The Department of Business, Economic Development, and Tourism (DBEDT) offers **comments with concerns** on SB 1289, which requires a rooftop solar energy generation system to be installed on all new single-family residential dwellings that are not granted a variance by DBEDT beginning on January 1, 2022.

For efficiency of resources and building permit processing time, DBEDT suggests tying the rooftop solar variance process to the building permit review and approval process since a solar water heater variance is required before a building permit is issued by the County. At present DBEDT is only charged with accepting and reviewing/approving requests for solar water heater variances.

DBEDT would like to suggest the following revisions:

1. Where ever the word "coordinator" is used, please substitute the word "county."
2. On page 4, lines 8 and 9, substitute "county" for "director of business, economic development, and tourism."
3. On page 4, line 12, replace the entire line with "county-designated fund."

Per Hawaii Revised Statutes 196-6.5 (a) (3), a "variance application shall only be accepted if submitted by an architect or mechanical engineer...who attests that...a

renewable energy technology system, as defined in section 235-12.5, is substituted for use as the primary energy source for heating water.” DBEDT recommends making clear that SB 1289 is not meant to substitute solar water heating with electric rooftop solar (e.g. for all new single-family residential dwellings) for water heating purposes.

Thank you for the opportunity to testify.

February 13th, 2019

Senate Committee on Energy, Economic Development, and Tourism,
And Committee on Housing
State Capitol, Room 414

LATE

RE: Support for Senate Bill 1289

Aloha Chair Chang, Chair Wakai, and Members of the Committees,

On behalf of Energy Toolbase, I am writing to express our full support for SB 1289. This measure requires a rooftop solar energy generation system to be installed on all new single-family residential dwellings that are not granted a variance beginning on 1/1/2022.

Solar energy technology, such as solar photovoltaic and solar hot water, are proven to help people save money on their energy bill, reduce electrical demand and the use of fossil fuels, and combat climate change. With some of the highest amount of solar energy installations per capita, bills like SB1289 are well in line with Hawaii's renewable energy goals and should be passed immediately.

Hawaii still gets over 80% of its energy from dirty fossil fuels, and consumers are paying the price through high energy bills and carbon emissions. In the last 20 years, the price of solar energy has dropped to all time lows and it gets more affordable every single day. Rolling the cost of a solar system into the price of a new home makes it even more affordable. Similar policy enacted last year in California found that a homeowner would actually save almost \$20,000 in energy and maintenance costs over the life of a 30 year mortgage.

Hawaii should be a leader in clean energy policy, and bills like this make us one.

Thank you for supporting clean solar energy and giving me the opportunity to testify. I am pleased to support SB 1289. Thank you for your leadership.

Sincerely,

Energy Toolbase

Adam Gerza
COO
adam@energytoolbase.com

Marissa Kunsch
Utility Rates Analyst
Marissa.kunsch@energytoolbase.com



Hawaii Solar Energy Association
Serving Hawaii Since 1977

LATE

**TESTIMONY
OF THE
HAWAII SOLAR ENERGY ASSOCIATION
IN REGARD TO
SB1289, RELATING TO ROOFTOP SOLAR INSTALLATION
BEFORE THE
SENATE COMMITTEE ON HOUSING
AND THE
SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND
TOURISM
FEBRUARY 13, 2019**

Aloha Chair Chang, Chair Wakai, and members of the Committees. My name is Will Giese and I am the Executive Director of the Hawaii Solar Energy Association (“HSEA”).

I STRONGLY SUPPORT SB 1289. This measure requires a rooftop solar energy generation system to be installed on all new single-family residential dwellings that are not granted a variance beginning on 1/1/2022.

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.

Solar energy technology, such as solar photovoltaic and solar hot water, are proven to help people **save money** on their energy bill, **reduce electrical demand** and the use of **fossil fuels**, and **combat climate change**. With some of the highest amount of solar energy installations per capita, bills like SB1289 are well in line with Hawaii’s renewable energy goals and should be passed immediately.

Hawaii still gets over 80% of its energy from dirty fossil fuels, and consumers are paying the price through high energy bills and carbon emissions. In the last 20 years, the price of solar energy has dropped to all time lows and it gets more affordable every single day. Rolling the cost of a solar system into the price of a new home makes it even more affordable. Similar policy enacted last year in California found that a homeowner would actually **save almost \$20,000 in energy and maintenance costs** over the life of a 30 year mortgage.

SB1289 is a big bill and will likely generate controversy. Luckily, several of these arguments have been made and overcome in California and are as if not more applicable



Hawaii Solar Energy Association
Serving Hawaii Since 1977

in Hawaii. The HSEA offers the following points to offer further clarification on this important measure:

SB1289 Will Not Substantially Raise New Home Prices

Similar to the solar water heater mandate, SB1289 will not significantly raise the median home price in Oahu, which was close to \$800,000 per home. Solar on new construction has significantly lower development costs due to lower permitting fees, zero customer acquisition costs, lower financing costs, and a variety of other factors.

In addition, the solar systems installed on these homes as part of a mandate will immediately allow the consumer to save money on their energy bills. In turn, the new home owner will redistribute that wealth back into the local economy, generating tax revenue for the state that would otherwise not have been generated.

SB1289 Will Help Accelerate Grid Innovation Across the State

Currently, there are numerous dockets and policy discussion ongoing in Hawaii in regard to transforming the grid and Hawaii's energy economy. By requiring solar on new homes, the legislature signals to the state that cost savings generated by a more democratized and distributed energy system are absolutely needed. Hawaiian Electric's Integrated Grid Planning process as well as the Power Supply Improvement Plan already envision most, if not all homes across Hawaii installing and using solar PV. This measure only solidifies an already moving policy.

SB1289 Will Not Negatively Impact the Housing Market

While it is true that new home buyers who are the first purchasers on a new home will pay a significantly reduced cost for their mandated solar system, each subsequent owner of that home will inherit all of the benefits without any of the cost. Furthermore, while the average cost of a solar and storage system RETROFIT can be between \$20,000-\$30,000, the cost for a new home installation will be much lower given contractor and bulk pricing discounts. Additionally, California's new solar homes mandate as well as overall price decreases across the market make this addition a relatively minor factor in overall home pricing trends in Oahu, before taking into account the enormous cost savings and positive environmental impacts generated from this measure.

In its current form, this measure requires further refinement. HSEA offers the following comments to help improve this measure:

- Subsection (a)(2) lists the "life cycle" of a solar system not to exceed 15 years. The average warranty term for most solar modules installed today is 20-25 years,



Hawaii Solar Energy Association

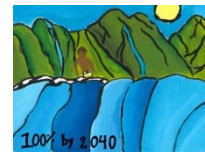
Serving Hawaii Since 1977

and average warranty terms for other power electronics are similarly marked. We recommend a life cycle cost analysis consider the system for a 20 year life span.

- Subsection (a) notes the following: “A variance application shall only be accepted if submitted by an architect or mechanical engineer licensed under chapter 464, who attests that:”. HSEA suggests that this application be reviews by an electrical engineer, rather than a mechanical one.

Hawaii should be a leader in clean energy policy, and bills like this make us one.

Thank you for supporting clean solar energy and giving me the opportunity to testify.



**SENATE COMMITTEE ON HOUSING
SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM**

February 13, 2019, 3:15 P.M.

Room 414

(Testimony is 1 page long)



TESTIMONY IN SUPPORT OF SB 1289

Aloha Chair Chang, Chair Wakai, and Committee members:

Blue Planet Foundation **supports** SB 1289, a measure that requires all new single-family homes to have rooftop solar. California—the world’s fifth largest economy—has already adopted a similar requirement. This bill will help lower Hawaii’s carbon footprint and can better align our planning efforts with our clean energy and climate goals. The measure can also lower the long-term energy costs for homeowners. Adding a rooftop solar system during the construction phase significantly reduces the installation cost for homeowners compared to adding solar photovoltaics post-construction.

Climate change will have devastating, long-term consequences on Hawaii’s environment, economy, and quality of life. For these reasons and others, the State of Hawaii has committed to a decisive and irreversible transition away from fossil fuels, and a swift transition to a clean energy economy powered by 100% renewable energy. The legislature has passed aggressive carbon reduction goals, including the goal to be net carbon neutral by 2045 (Act 15 of 2018) and

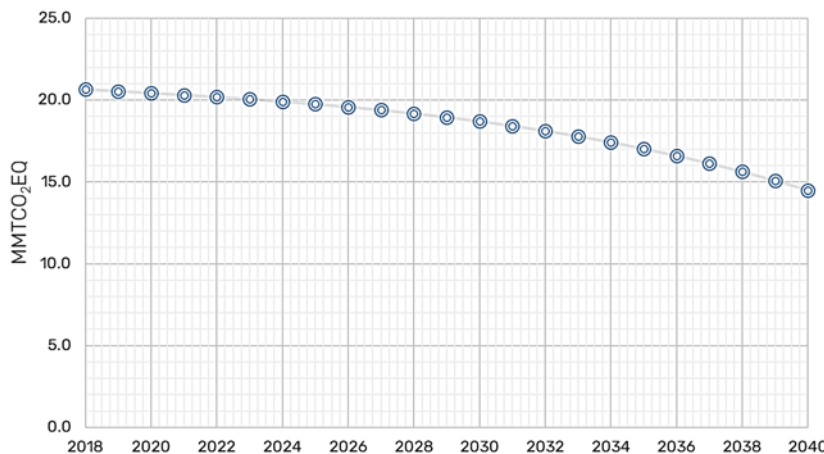


Figure 1. Best-case Hawaii greenhouse gas emissions trend with current state policies

strive to achieve the objectives of the Paris Climate Agreement (Act 32 of 2017). Setting these bold targets is important, but alone it is insufficient. Despite a growing portfolio of standards, incentives, and targets, Hawaii’s current policies will not succeed in significantly reducing Hawaii’s current overall carbon emissions over the next few decades.

Hawaii needs decisive leadership and bold, implementation-focused policies like SB 1289 if we hope to achieve our clean energy and climate goals.

Thank you for the opportunity to testify.



Email: communications@ulupono.com

SENATE COMMITTEES ON HOUSING AND ENERGY, ECONOMIC DEVELOPMENT, &
TOURISM

Wednesday, February 13, 2019 — 3:15 p.m. — Room 414

Ulupono Initiative Supports SB 1289, Relating to Rooftop Solar Installation

Dear Chair Chang, Vice Chair Kanuha, Chair Wakai, Vice Chair Taniguchi, and Members of the Committees:

My name is Murray Clay and I am Managing Partner of the 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 manage waste and fresh water resources. 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 SB 1289, which requires a rooftop solar energy generation system to be installed on all new single-family residential dwellings that are not granted a variance beginning on January 1, 2022, because it aligns with our goal of increasing the production of clean, renewable energy in Hawai'i.

Solar is a great investment for the residents of Hawai'i. After a solar system is paid off (usually within 7-8 years), the electricity from the sun is largely free, saving most homeowners upwards of \$100,000 over 20 years.¹ In addition, solar photovoltaic adds value to the home if the homeowner should decide to sell it in the future.

According to the Hawaiian Electric (HECO) (O'ahu), Maui Electric (MECO), and Hawai'i Electric Light (HELCO) (Hawai'i Island) plan for procurement of grid-scale energy resources from a February 7th, 2019 presentation, the electric utilities need to procure a substantial amount of additional renewable energy resources going forward to meet the 100 percent renewable portfolio standard law.

For HECO, it would need to acquire an additional 160,000 megawatt hours annually to meet its 2022 power supply improvement plan target. The plan also calls for 426 megawatts of load shifting storage in 2022. In addition, AES, the 180 megawatt coal-fired power plant, which represents 16 percent of Hawaiian Electric's system peak needs, will be

¹ <https://www.revolusun.com/resi-pv>

expiring and not renewed in September 2022.

For MECO, it would need to acquire an additional 65,000 megawatt hours annually to meet its 2022 power supply improvement plan target. Their Kahului power plant is expected to retire by the end of 2024 and its power production must be replaced.

For HELCO, it would need to acquire an additional 70,000 megawatt hours to meet its 2022 power supply improvement plan target. This also assumes that Puna Geothermal Venture and Hu Honua Bioenergy are online, so additional sources of energy may need to be procured if this is not possible.

Overall, there is a large need for additional renewable energy generation and this bill can help to provide that.

If this law were to be implemented, it would still need to comply with the tariff structure. Therefore, processes exist to ensure fair pricing.

While the solar water heater mandate was enacted, variances to that mandate have been approved over 99 percent of the time. This law needs to ensure that exemptions are granted only if the criteria laid out in the bill are truly met.

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

Thank you for this opportunity to testify.

Respectfully,

Murray Clay
Managing Partner



LATE

**SENATE COMMITTEE ON HOUSING
SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND
TOURISM**

February 13, 2019, 3:15 p.m.
(Testimony is 2 pages long)

TESTIMONY IN SUPPORT OF SB 1289

Aloha Chair Chang, Chair Wakai, and Members of the Committee:

The Alliance for Solar Choice (TASC) respectfully supports SB 1289, requiring rooftop solar on all new homes built after 2022. This bill would (1) reduce pollution, (2) keep more money circulating in our state economy, and (3) make housing more affordable.

As a preliminary matter, it is important to distinguish between utility-scale and distributed renewable energy sources. Electric power utilities are currently incentivized to build and upgrade electric infrastructure. Those costs are passed onto customers. As the Wall Street Journal explained “the more [utilities] spend, the more profits they earn,” and called this “a regulatory system that turns corporate accounting on its head.” Despite the fact that the demand for electricity has lowered over the past 20 years, investments in electricity infrastructure have only grown with corresponding increases in rates. As Hawaii Public Utilities Commission’s recently released staff report noted, the HECO Companies’ planned capital expenditures are expected to increase their rate base between 4-7% in 2019 and between 5-8% in 2020. These increases are on top of already high operational expenses: for non-fuel O&M expenses, the HECO Companies rank 106 out of the 127 utilities reported.

As we shift towards a 100% clean energy powered economy, the potential for utilities to push centralized power systems and increased spending on unnecessary transmission and distribution costs is great. During the NextEra proceeding, utility executives contended the switch to a 100% RPS would cost over 20 billion dollars in additional costs. Even Hawaiian Electric’s planning documents do not anticipate any cost savings to consumers - despite adopting cheaper renewable energy generation sources — until 2030.

There is a better way. States like California recognize adoption of solar and storage make the system more affordable, clean, and resilient for everyone (even for those who don’t go solar). By requiring new housing developments to install solar and storage, there are

direct savings costs by requiring less utility infrastructure. Circuits can be built assuming less electrical demand and, if the demand is needed, it can be met with distributed resources located nearby. Further, these new communities are more resilient and capable of weathering natural disasters.

Specifically relevant to this bill, the California Energy Commission determined requiring rooftop solar would immediately save homeowners money. In a statewide analysis — looking at different solar environments and different types of housing — they concluded the average customer would pay \$40 more per month in mortgage payments. But the same customer would save an average of \$80 in electricity costs. It's fairly safe to assume a similar or more favorable analysis would apply in Hawaii where the cost of housing is comparable to California, but the cost of electricity is significantly higher.

We encourage you to move this measure forward.

Mahalo for the opportunity to testify.

SB-1289

Submitted on: 2/12/2019 10:45:21 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Melodie Aduja	Testifying for O`ahu County Committee on Legislative Priorities of the Democratic Party of Hawai`i	Support	No

Comments:



To: The House Committees on Energy, Economic Development, and Tourism;
and Housing
From: Brodie Lockard, Hawaii State Climate Lead, Organizing for Action
Date: Wednesday, February 13, 2019, 3:15 pm

In strong support of SB 1289

LATE

Aloha Chair Chang, Chair Wakai, and Members of the Committees—

Organizing for Action strongly supports SB 1289.

About 58.4 gallons of oil are burned in Hawaii every second. Despite solar being cheaper and cleaner, thousands of homes are built every year that increase the amount of imported oil needed in Hawaii.

There is a better way. California recently adopted a policy that requires every new home to be built with photovoltaic rooftop solar. The California Energy Commission calculated it would save homeowners an average of \$40 a month. That number should be far larger in Hawaii, where residents pay approximately twice the national average in electricity costs.

Although environmentally friendly rooftop solar would save homeowners money, the majority of new homes in sunny Hawaii use fossil fuels to power their home, despite the ease of installing solar while the house is under construction. SB 1289 is a common sense policy requiring developers to have the long-term interest of new home buyers in mind.

Thank you for the opportunity to testify.

Brodie Lockard
Hawaii State Climate Lead, Organizing for Action



Green Power Projects LLC
Alan Lennard, Managing Director
P.O. Box 818
Haleiwa, HI 96712
T 808.381-3447 F 808.381-0547
E. alan.lennard@greenpowerprojects.com

Alan Lennard
P.O. Box 818
Haleiwa, Hawaii 96712-0818
Tel: (808) 381-3447
www.greenpowerprojects.com



Testimony of Alan Lennard
Managing Director of Green Power Projects LLC
e-mail: alan.lennard@greenpowerprojects.com

In SUPPORT of SB 1289 RELATING TO ROOFTOP SOLAR INSTALLATION

Before the
COMMITTEE ON HOUSING
Senator Stanley Chang, Chair
Senator Dru Mamo Kanuha, Vice Chair

COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM

Senator Glenn Wakai, Chair
Senator Brian T. Taniguchi, Vice Chair

Wednesday, February 13, 2019 3:15
Conference Room 414
State Capitol
415 South Beretania Street

Aloha, Chairs Chang and Wakai, Vice-Chairs Kanuha and Taniguchi and members of both Committees.

My name is Alan Lennard. I am the Managing director of Green Power Projects LLC. Green Power Projects LLC is a Solar project facilitation company working towards 100% Renewable Energy capacity in Hawaii. Our vision is a Hawaiian energy economy based 100% on renewable sources indigenous to Hawaii.

We are in Full **SUPPORT** of SB 1289

This measure requires a rooftop solar energy generation system to be installed on all new single-family residential dwellings that are not granted a variance beginning on 1/1/2022.

Solar energy technology, such as solar photovoltaic and solar hot water, are proven to help people save money on their energy bill, reduce electrical demand and the use of fossil fuels, and combat climate change. With some of the highest amount of solar energy installations per capita, bills like SB1289 are well in line with Hawaii's renewable energy goals and should be passed immediately.

Hawaii still gets over 80% of its energy from dirty fossil fuels, and consumers are paying the price through high energy bills and carbon emissions. In the last 20 years, the price of solar energy has dropped to all time lows and it gets more affordable every single day. Rolling the cost of a solar system into the price of a new home makes it even more affordable. Similar policy enacted last year in California found that a homeowner would actually save almost \$20,000 in energy and maintenance costs over the life of a 30 year mortgage.

Hawaii should be a leader in clean energy policy, and bills like this make us one.

Thank you for allowing me to testify.

Alan Lennard -diy signature

Alan Lennard
Managing Director
Green Power Projects LLC
P.O. Box 818
Haleiwa, HI 96712-0818

SB-1289

Submitted on: 2/12/2019 5:25:35 PM

Testimony for EET on 2/13/2019 3:15:00 PM



Submitted By	Organization	Testifier Position	Present at Hearing
Julian Miller	Individual	Support	No

Comments:

Having solar for all new homes makes sense. Starting now with solar electricity and solar hot water is essential. Climate change is real.

LATE

SB-1289

Submitted on: 2/12/2019 5:37:19 PM

Testimony for EET on 2/13/2019 3:15:00 PM

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

Comments:

Strongly Support! The ocean is rising.

SB-1289

Submitted on: 2/12/2019 6:01:00 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Roy Skaggs	Individual	Support	No

Comments:

Aloha Chair Chang, Chair Wakai, and Members of the Committees,

I STRONGLY SUPPORT SB 1289. *This measure requires a rooftop solar energy generation system to be installed on all new single-family residential dwellings that are not granted a variance beginning on 1/1/2022.*

Solar energy technology, such as solar photovoltaic and solar hot water, are proven to help people save money on their energy bill, reduce electrical demand and the use of fossil fuels, and combat climate change. With some of the highest amount of solar energy installations per capita, bills like SB1289 are well in line with Hawaii's renewable energy goals and should be passed immediately.

Hawaii still gets over 80% of its energy from dirty fossil fuels, and consumers are paying the price through high energy bills and carbon emissions. In the last 20 years, the price of solar energy has dropped to all time lows and it gets more affordable every single day. Rolling the cost of a solar system into the price of a new home makes it even more affordable. Similar policy enacted last year in California found that a homeowner would actually save almost \$20,000 in energy and maintenance costs over the life of a 30 year mortgage.

Hawaii should be a leader in clean energy policy, and bills like this make us one.

Thank you for supporting clean solar energy and giving me the opportunity to testify.

Aloha,

Roy Skaggs

SB-1289

Submitted on: 2/12/2019 6:20:57 PM

Testimony for EET on 2/13/2019 3:15:00 PM



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

Comments:

Help preserve our biosphere. Clean energy now. Please pass SB2389

SB-1289

Submitted on: 2/12/2019 7:09:31 PM

Testimony for EET on 2/13/2019 3:15:00 PM



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

Comments:

Dear Legislators,

Everything about this bill--except the start date (see below)--is a win for Hawaii and the planet.

SB1289 will:

- Help Hawaii meet its goal of 100% renewable energy sources
- Require less fossil fuel use by Hawaiian utilities (and thus the planet)
- Save homeowners money on solar panel installation by pre-installing the panels on each new home (thus allowing financing through lower-interest mortgage loans)
- Add distributed energy resources, such as customer-sited solar photovoltaics and battery storage systems to our energy mix (key technologies that enable Hawaii residents to contribute to and benefit from a clean Hawaii energy system)
- Create more jobs for Hawaii people and companies

While we're at it, why not include new State facilities in the provisions of this bill?

And why wait till 2022? Why not ASAP?

Please support the provisions of SB1289 but move the date up. This important climate action is low-hanging fruit and needs to be approved and begun as soon as possible.

Thank you,

Jan Pappas

Aiea, Hawaii

SB-1289

Submitted on: 2/12/2019 8:58:30 PM

Testimony for EET on 2/13/2019 3:15:00 PM



Submitted By	Organization	Testifier Position	Present at Hearing
Chad Bundy	Individual	Support	No

Comments:

Aloha Chair Chang, Chair Wakai, and Members of the Committees,

I strongly support SB 1289, which makes solar a standard feature on all new homes. With the highest electrical rates in country and the impacts of climate change already being felt in Hawaii, every home in Hawaii should be using the sun.

In enacting a similar policy, California calculated that rooftop solar on all new homes would save residents an average of \$40 per month. This number is likely higher here in Hawaii, where the average resident pays the highest electrical rates in the country.

Although environmentally friendly rooftop solar would save homeowners money, the majority of new homes in sunny Hawaii use fossil fuels to power their home, despite the ease of installing solar while the house is under construction. SB 1289 is a common sense policy requiring developers to have the long-term interest of new home buyers in mind.

Chad B.

SB-1289

Submitted on: 2/12/2019 3:30:03 PM

Testimony for EET on 2/13/2019 3:15:00 PM

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

Comments:

LATE

SB-1289

Submitted on: 2/13/2019 10:29:28 AM

Testimony for EET on 2/13/2019 3:15:00 PM

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

Comments:

SB-1289

Submitted on: 2/13/2019 11:07:00 AM

Testimony for EET on 2/13/2019 3:15:00 PM

LATE

Submitted By	Organization	Testifier Position	Present at Hearing
Phaethon Keeney	Individual	Support	No

Comments:

Climtate change is here and it's not looking pretty, Hawai'i wants to be Carbon neutral asap! One big way to get us there is the Solar Ready Homes bill, thank you!



SIERRA CLUB OF HAWAII

MĀLAMA I KA HONUA. Cherish the Earth.

LATE

SENATE COMMITTEE ON HOUSING

SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM

February 13, 2019 3:15 PM Room 414

In **SUPPORT** of **SB 1289**: Relating to Rooftop Solar Installation

Aloha Chair Chang, Chair Wakai, and members of the committees,

On behalf of our 20,000 members and supporters, the Sierra Club of Hawai'i **strongly supports SB 1289**, which requires a rooftop solar energy generation system to be installed on all new single-family residential dwellings that are not granted a variance beginning on 1/1/2022.

Requiring all new single-family homes be "solar-ready" advances Hawai'i's clean energy goals. This bill would increase the use of renewable energy and promote energy efficient construction while decreasing the use of imported, polluting fossil fuels. Hawai'i has been a leader in clean energy and climate change policy. Encouraging the adoption of solar photovoltaic for all new home construction helps transform Hawai'i's energy economy and makes progress towards our 100% Renewable Portfolio Standards and 100% carbon neutrality by 2045 goals.

SB 1289 encourages solar on new home construction, but still allows a variance process for when rooftop solar is impractical or cost-prohibitive. If the architect or engineer who signs the variance attests that the home has poor solar resources or solar is cost-prohibitive over a life cycle analysis, and the energy coordinator agrees, then the new home will not need to install a rooftop solar. For this variance application, we would recommend amending the life-cycle analysis language from "a life cycle that does not exceed fifteen years" to instead consider the costs over a twenty year period, as the average warranty for most rooftop solar energy generation systems installed today is 20-25 years long.

Thank you very much for this opportunity to provide testimony in **support of SB 1289**.

Mahalo,

Jodi Malinoski, Policy Advocate

SB-1289

Submitted on: 2/13/2019 1:12:46 PM

Testimony for EET on 2/13/2019 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Ronald Yasuda	Individual	Comments	No

Comments:

Dear Senators,

Why wait until 1/1/2021 to put this bill into effect? Let's do it NOW (as soon of the bill is passed). I support this bill except for the date it will be put into effect.

Ronald Yasuda

SB-1289

Submitted on: 2/13/2019 2:04:07 PM

Testimony for EET on 2/13/2019 3:15:00 PM

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Submitted By	Organization	Testifier Position	Present at Hearing
Emily Garland	Individual	Support	No

Comments:

SB-1289

Submitted on: 2/13/2019 2:11:40 PM

Testimony for EET on 2/13/2019 3:15:00 PM

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

Comments:

SB-1289

Submitted on: 2/13/2019 2:47:45 PM

Testimony for EET on 2/13/2019 3:15:00 PM

LATE

Submitted By	Organization	Testifier Position	Present at Hearing
Barbara Hershey	Individual	Support	No

Comments:

SB-1289

Submitted on: 2/13/2019 3:43:20 PM

Testimony for EET on 2/13/2019 3:15:00 PM

LATE

Submitted By	Organization	Testifier Position	Present at Hearing
Koohan Paik	Individual	Support	No

Comments: