



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAI'I  
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## Testimony of the Department of Commerce and Consumer Affairs

Before the  
House Committee on Energy & Environmental Protection  
Tuesday, February 4, 2025  
9:00 a.m.  
Conference Room 325

On the following measure:  
**H.B. 790, RELATING TO RENEWABLE ENERGY**

Chair Lowen and Members of the Committee:

My name is Michael Angelo, and I am the Executive Director of the Department of Commerce and Consumer Affairs (Department) Division of Consumer Advocacy. The Department offers comments on this bill.

The purpose of this bill is to: (1) establish an installation goal for customer-sited distributed energy resources in the State; (2) ensure that fair compensation is provided to distributed energy resources exports as part of grid service programs; and (3) authorize retail wheeling of renewable energy and requires the Public Utilities Commission (Commission) to establish policies and procedures to implement retail wheeling and microgrid service tariffs.

The Department appreciates the bill's goal of increasing the deployment of clean renewable resources within the State and seeking to improve grid reliability. Distributed energy resources (DER) are and will continue to always be a necessary component of the portfolio of solutions needed to achieve the State's clean energy goals and support

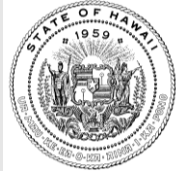
the delivery of reliable electricity services. Indeed, society has recognized the value of DER for a significant amount of time by offering robust tax incentives at both the federal and State levels in Hawaii that significantly decrease the upfront costs to procure customer-sited renewable energy technologies and thereby facilitate their adoption into the grid. The Department also supports compensation for DER based on the value that they deliver to the grid at the time they provide the service.

Regarding establishing a cap for DER adoption, the Department notes that there are currently stakeholder driven processes in place to determine the most cost-effective mix of resources and technologies to meet Hawaii's Renewable Portfolio Standard goals and maintain grid reliability. The Department also notes that crediting customers at the "retail rate" of electricity raises equity concerns because the full usage rates paid by customers recover a range of costs beyond the cost of generating electricity such as the costs related to the infrastructure delivering the energy, maintaining reliability, and for the energy efficiency programs managed by a third-party administrator (i.e., the public benefits fund surcharge). The Department also notes that the Commission has initiated Phase 4 of the DER Program in Docket No. 2019-0323 where it intends to establish a new DER grid-services program. Establishing retail wheeling where a retail customer can purchase energy from any supplier raises concerns about how the reliability of the grid can be maintained and regulated from multiple suppliers.

Thank you for the opportunity to testify on this bill.

JOSH GREEN, M.D.  
GOVERNOR

SYLVIA LUKE  
LT. GOVERNOR



STATE OF HAWAII  
PUBLIC UTILITIES COMMISSION  
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## Testimony of the Public Utilities Commission

To the  
House Committee on  
Energy and Environmental Protection

February 4, 2024  
9:00 a.m.

Chair Lowen, Vice Chair Perruso, and Members of the Committee:

**Measure:** H.B. No. 790  
**Title:** RELATING TO RENEWABLE ENERGY.

### Position:

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

### Comments:

The Commission appreciates the intent of this measure to promote increased renewable energy production by encouraging customer investments in distributed energy resources ("DER"), particularly solar plus storage systems. The Commission supports examination of diverse measures that would promote the production of clean electricity and understands that generators of renewable energy play an important role in the State's transition to renewable energy and should be fairly compensated for the energy exports and grid services they provide.

To determine fair compensation, the Commission oversees a collaborative process with the utility, the consumer advocate, and other stakeholders that relies on extensive analysis to determine the value that distributed energy exports provide to the grid. This process has determined that the value that distributed energy exports provide to the grid is typically lower than the retail rate. The Commission has also explored the value of resiliency, capacity, and ancillary services through this process, but it remains challenging to determine a precise quantitative figure for these benefits. The Commission also notes that the value of distributed energy exports will evolve during the renewable energy transition. For Hawaiian Electric's programs, the Commission has established an 'update framework' that requires regular review of the compensation rate for distributed energy exports and a mechanism to update the program every three years to ensure that the

programs are meeting the above goals and to continue to refine compensation for resiliency and other benefits.

Establishing the compensation rate for distributed energy exports through statute may limit the Commission's ability to investigate the role of distributed energy in the State and design programs to meet the above objectives. Additionally, the Commission emphasizes that it is important to understand the impact of this measure on non-participating ratepayers. A potential increasing in export credits may cause non-participating ratepayers to bear a larger energy burden, which is an important focus for the Commission. The Commission also notes that a definition of "full retail rate" in the context of this measure would need to be clarified, as there could be conflicting interpretations.

Regarding the Commission establishing a retail wheeling tariff, the Commission notes that electricity wheeling requires an examination of many complex and interrelated issues to ensure reliability and cost-effectiveness, such as interconnection, availability of transmission and distribution capacity, appropriate rates and rate design, back-up power requirements, amongst others. As discussed at the previous legislative session, the Commission agreed to open a docket to investigate whether electricity wheeling is in the State's public interest.

In July 2024, the Commission opened Docket No. 2024-0200 to prompt feedback from key stakeholders regarding the feasibility of wheeling in Hawaii and will determine whether intragovernmental wheeling, as part of its initial stage, is in the public interest. This would be followed by a report to the Legislature no later than twenty days prior to the convening of the regular session of 2026. The intent is to then shift this investigation to other forms of wheeling, including retail wheeling. Authorizing retail wheeling in statute prior to closing the Commission's open investigation regarding electricity wheeling, may deter from the intent of this measure to provide fair compensation mechanisms for distributed energy resource exports while enhancing grid reliability and resilience.

As detailed above, the Commission welcomes the integration of renewable energy into the built environment, such as parking shade structures and rooftops of State facilities. The following ongoing proceedings have identified and tailored compensation mechanisms for renewable energy generators that State departments and agencies are eligible to pursue:

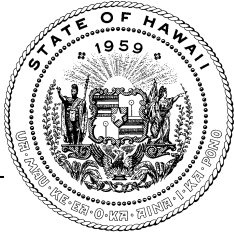
- Docket No. 2019-0323 is the Commission's docket for distributed energy resources, which has established compensation structures for customer-sited renewable energy generation, such as solar and storage, connected to Hawaiian Electric's grid to help serve customer resilience and meet grid needs. The newest programs remove system size limits and encourage the development of larger renewable energy systems.
- Docket No. 2015-0389 is the Commission's docket focused on developing community-based renewable energy ("CBRE") programs, which allow customers to receive benefits for "shared solar" installations that are not

customer-sited. This proceeding has resulted in over 4 megawatts of shared solar installations, with several additional projects under review or construction.

- Docket No. 2018-0163 is the Commission's Microgrid docket, through which the Commission has established a microgrid services tariff containing rules for two types of microgrids: hybrid microgrids, in which customers may combine customer-sited equipment with utility-owned infrastructure, and customer microgrids, where a customer's infrastructure is exclusively used to supply all their own electricity needs during emergencies.

As a result of these ongoing efforts, the Commission offers to file a report with the legislature by the start of the 2026 legislative session. In this report, the Commission will identify its efforts to address the objectives and requirements outlined in this measure.

Thank you for the opportunity to testify on this measure.



# HAWAII STATE ENERGY OFFICE STATE OF HAWAII

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MARK B. GLICK  
CHIEF ENERGY OFFICER

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Testimony of  
**MARK B. GLICK, Chief Energy Officer**

before the  
**HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION**

Tuesday, February 4, 2025  
9:00 AM  
State Capitol, Conference Room 325 and Videoconference

In Support of  
**HB 790**

## **RELATING TO RENEWABLE ENERGY**

Chair Lowen, Vice Chair Perruso, and Members of the Committee, the Hawai'i State Energy Office (HSEO) supports HB 790, specifically the portion of section 2 that establishes an installation goal for customer-sited distributed energy resources (DER) in Hawai'i.

A recent Executive Order signed by Governor Green points to the importance of distributed energy resources as "a leading contributor to the state's sustainability and resiliency goals by providing critical power for homes and businesses."<sup>1</sup> According to a 2022 article published by the U.S. Energy Information Administration, Hawai'i has the highest small-scale solar penetration per capita in the nation,<sup>2</sup> showing Hawai'i's leadership in renewable energy.

HSEO supports the portion of section 2 in this bill that establishes a goal of installing fifty thousand new installations of customer-sited distributed energy resource systems in Hawai'i by 2030. This portion of the measure directly reflects the objective

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<sup>1</sup> Executive Order No 25-01 signed January 27, 2024: [https://governor.hawaii.gov/wp-content/uploads/2025/01/2501085\\_Executive-Order-No.-25-01.pdf](https://governor.hawaii.gov/wp-content/uploads/2025/01/2501085_Executive-Order-No.-25-01.pdf).

<sup>2</sup> U.S. EIA, *Record U.S. small-scale solar capacity was added in 2022*, published September 11, 2023: <https://www.eia.gov/todayinenergy/detail.php?id=60341#:~:text=Although%20California%20has%20the%20most.at%20541%20watts%20per%20capita.&text=A%20large%20share%20of%20Hawaii's.from%20oi%20fired%20power%20plants>.

stated in the aforementioned Executive Order. Also, as stated in HSEO's Act 238 report regarding decarbonization, "DER remains a core pillar of the decarbonization effort, particularly assisting the electricity industry in achieving renewable energy goals."<sup>3</sup>

HSEO is cognizant of the issues surrounding affordability, reliability, and resilience. With Hawai'i having electric bills that average three times the national average, the pursuit of additional solar can alleviate the issues in all three categories. The cost of electricity from renewable energy sources has declined over the years, and now renewable energy is often the lowest cost source as compared to conventional fossil fuels.<sup>4</sup>

HSEO recognizes that numerous efforts have been made to pursue successful implementation and grid integration of customer sited solar and battery energy storage systems through numerous programs in both Hawaiian Electric Company<sup>5</sup> and Kaua'i Island Utility Cooperative<sup>6</sup> service territories. Additional work is being done to reduce delays in permitting as well. These efforts, combined with the support of the Green administration and the Executive Order, make this bill a very well-timed endeavor.

HSEO defers to the Public Utilities Commission on the regulatory aspects of implementing this measure.

Thank you for the opportunity to testify.

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<sup>3</sup> Hawaii State Energy Office, Hawaii Pathways to Decarbonization Act 238 Report, page 90: [https://energy.hawaii.gov/wp-content/uploads/2022/10/Act-238\\_HSEO\\_Decarbonization\\_FinalReport\\_2023.pdf](https://energy.hawaii.gov/wp-content/uploads/2022/10/Act-238_HSEO_Decarbonization_FinalReport_2023.pdf)

<sup>4</sup> HSEO annual report 2023, page 15: [https://energy.hawaii.gov/wp-content/uploads/2024/01/HSEO\\_2023\\_Annual\\_Report.pdf](https://energy.hawaii.gov/wp-content/uploads/2024/01/HSEO_2023_Annual_Report.pdf)

<sup>5</sup> Hawaiian Electric Smart Renewable Energy Programs: [Smart Renewable Energy Programs | Hawaiian Electric](#)

<sup>6</sup> Kauai Island Utility Cooperative: [Rooftop Solar | Kauai Island Utility Cooperative](#)

**JOSH GREEN, M.D.**  
GOVERNOR

**SYLVIA LUKE**  
LT GOVERNOR



**Hawaii Green Infrastructure Authority**

An Agency of the State of Hawaii

**JAMES KUNANE TOKIOKA**  
CHAIR

**GWEN S YAMAMOTO LAU**  
EXECUTIVE DIRECTOR

**Testimony of  
Gwen Yamamoto Lau  
Executive Director  
Hawaii Green Infrastructure Authority  
before the  
House Committee on Energy & Environmental Protection  
Tuesday, February 4, 2025, 9:00 AM  
State Capitol, Conference Room 325  
in consideration of  
House Bill No. 790  
RELATING TO RENEWABLE ENERGY**

Chair Lowen, Vice Chair Perruso and Members of the Committee:

Thank you for the opportunity to testify in support of HB790, which establishes a goal of 50,000 new distributed energy resources over the next five years and ensures fair compensation for distributed energy resources.

This measure is in direct alignment with the Governor's Executive Order 25-01, accelerating Hawaii's transition toward 100% renewable energy by maximizing distributed solar energy paired with battery storage to low and moderate-income residents with a target of 10,000 installations annually.

Additionally, ensuring fair compensation increases the cost-effectiveness of said installations and helps underserved ratepayers lower their energy burden through the Hawaii Green Infrastructure Authority's (HGIA) financing program.

HGIA defers to the Public Utilities Commission on the regulatory aspects of this measure.

Thank you for this opportunity to testify in support of HB 790.





**Hawaiian  
Electric**

**TESTIMONY BEFORE THE HOUSE COMMITTEE ON  
ENERGY AND ENVIRONMENTAL PROTECTION**

**HB 790  
Relating to Renewable Energy**

Tuesday, February 4, 2025  
9:00 am  
State Capitol, Conference Room 325

Kaiulani Shinsato  
Director, Customer Energy Resources  
Hawaiian Electric

Dear Chair Lowen, Vice Chair Perruso, and Members of the Committee,

My name is Kaiulani Shinsato and I am testifying on behalf of Hawaiian Electric **in opposition** to HB 790.

Hawaiian Electric supports the intent of this bill -- to continue to grow Distributed Energy Resources (“DER”) in Hawai‘i. Hawai‘i leads the nation in the adoption of DERs, yet Hawaiian Electric fully understands that we need to continue to grow DERs going forward. DERs are part of the pathway to achieve our clean energy goals and to provide options to our customers to better manage their electric bills, have resiliency at their homes and businesses, and contribute to Hawai‘i's clean energy future.

However, this bill would require energy exported to the electric grid past a participating customer-generator’s point of common coupling from photovoltaic solar systems paired with energy storage as part of a grid service program to be credited at the full retail rate for electricity for the relevant time period.

This issue was fully vetted over multiple years and already decided in the Public Utilities Commission’s (“Commission”) proceeding on DER, Docket No. 2019-0323.

On December 4, 2023, in an almost 200-page Decision and Order, the Commission denied retail crediting for energy exports enrolled in grid services based on the full record in the proceeding. This bill effectively circumvents years of consideration among multiple stakeholders and thoughtful deliberation by the Commission in Docket No. 2019-0323. More recently, the Commission directed the parties in the DER docket to reevaluate Hawaiian Electric's current grid services program. The parties are currently researching best practices and vetting proposals before the Commission. As a part of this process, Hawaiian Electric is currently considering offering retail crediting, but only under limited emergency-type circumstances. This bill would effectively circumvent this process that is already underway before the Commission.

More importantly, providing retail crediting exacerbates concerns about equity and affordability. Retail crediting will significantly increase the cost of Hawaiian Electric's grid services program. These costs are paid for by all customers, including low-to-moderate income customers, and customers on fixed incomes. Hawaiian Electric acknowledges that its grid services programs should provide sufficient incentives for customers to invest in DERs and participate in grid services programs. However, these incentives should not come at a cost that unfairly impacts non-DER customers, including many who are facing financial hardship.

In addition, HB 790 requires the Commission to establish a goal of installing fifty thousand new installations of DERs in the State by 2030. Hawaiian Electric again supports the intent behind setting this goal that would incentivize additional growth of DERs in Hawai'i. However, Hawaiian Electric has already set this goal of 50,000 new rooftop solar systems by 2030 based on extensive modeling and analysis as a part of its Climate Action Plan and Integrated Grid Plan ("IGP"). The goal in HB 790 does not

appear to be based in any analysis and seems duplicative and unnecessary given Hawaiian Electric's Climate Action Plan and IGP that already call for growth of DERs by 2030.

With respect to the sections of HB 790 that require the Commission to implement retail wheeling and microgrid service tariffs, the Commission has already opened a wheeling docket (Docket No. 2024-0200), which is ongoing, and microgrid services tariff docket (Docket No. 2018-0163), although this docket is currently suspended. Hawaiian Electric recommends that these important and complex matters get fully vetted and determined with the right stakeholders through the regulatory process before the Commission.

For all of these reasons, Hawaiian Electric opposes HB 790. Thank you for this opportunity to testify.



Legislative Testimony of Sunrun Inc.  
Before the EEP Committee  
February 4, 2025

**IN SUPPORT of HB790 – Relating to Renewable Energy**

Dear Chair Lowen, Vice Chair Perruso, and distinguished Members of the Committee on Energy and Environmental Protection,

Sunrun is the nation’s leading home solar, battery storage and energy services company, and has a long and proud history in Hawai‘i with office and warehouse locations on O‘ahu, Maui, and Hawai‘i Islands. We employ more than 350 professionals across the islands, including sales/marketers, customer experience professionals, and installation team members including electrical inspectors, technicians, forepersons and warehouse personnel.

**Sunrun strongly supports HB790**, which would help Hawai‘i and its residents achieve critical affordability, reliability, resilience and sustainability goals by:

- 1) Establishing an ambitious installation goal for customer-sited distributed energy resources (DERs) in Hawai‘i,
- 2) Ensuring that fair compensation is provided to DER exports as part of grid service programs, and
- 3) Authorizing retail wheeling of renewable energy and requiring the PUC to establish policies and procedures to implement retail wheeling and microgrid service tariffs.

Hawai‘i has a 100% renewable portfolio standard (RPS) by 2045,<sup>1</sup> and DER systems are critical to achieving the state’s RPS goals. In 2023, solar power generated 19% of the state’s total electricity, largely due to the rapid uptake of small-scale, customer-sited solar systems.<sup>2</sup> Also in 2023, Hawaiian Electric (HECO) achieved a 33% consolidated RPS, largely due to continued DER adoption.<sup>3</sup> Rooftop solar is the leading contributor to Hawai‘i’s clean energy portfolio, making up over 46% of all renewable energy in the state.<sup>4</sup> Continued implementation of rooftop solar has proven to be a strong component of the state’s renewable energy generation and contributes to a more resilient energy system while lowering energy costs for all ratepayers.

Sunrun strongly supports HB790 and respectfully urges the committee to advance this measure. Mahalo for the opportunity to provide testimony on this critical legislation. As a national solar, storage and energy services company, Sunrun has a broad view of states’ clean energy policies and stands ready to assist Hawai‘i with its policy goals.

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<sup>1</sup> <https://energy.hawaii.gov/what-we-do/clean-energy-vision/>

<sup>2</sup> <https://www.eia.gov/state/?sid=HI#tabs-1>

<sup>3</sup> [https://www.hawaiianelectric.com/documents/about\\_us/news/2024/20240221\\_hawaiian\\_electric\\_announces\\_2023\\_rps.pdf](https://www.hawaiianelectric.com/documents/about_us/news/2024/20240221_hawaiian_electric_announces_2023_rps.pdf)

<sup>4</sup> <https://www.hawaiianelectric.com/about-us/performance-scorecards-and-metrics/renewable-energy>



# INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL UNION 1260 EMPOWERING THE PACIFIC

**THIRTY-THIRD LEGISLATURE, 2025- Committee on Energy and Environmental Protection**

**HEARING DATE:** Tuesday, February 4, 2025

**TIME:** 9:00 a.m.

**PLACE:** House Committee Room 325

**RE:** House Bill 790- OPPOSE

Aloha Honorable Chair Lowen, Vice-Chair Perruso, and Committee Members;

The International Brotherhood of Electrical Workers Local 1260 (IBEW1260) would like to respectfully offer the following testimony in OPPOSITION to House Bill 790.

IBEW Local 1260, is comprised of approximately 3,000 members throughout Hawaii and Guam and consists of a diverse and highly-skilled workforce that supports the electric utility infrastructure across our state as well as government service contracts and broadcasting. It's our duty to serve and to protect the well-being of our members, but beyond that, it is incumbent upon all of us to serve and protect the well-being of our island home.

HB790 proposes to establish an installation goal for customer-sited distributed energy resources in the State and ensures its fair compensation as well as authorizes retail wheeling of renewable energy and requires that the PUC establish policies and procedures to implement wheeling and micro grid service tariffs.

IBEW1260 generally supports the intent of this measure, however we are not entirely confident that the proliferation of micro grids and retail wheeling will have the anticipated long-term benefits to the public. The safety of our members and service to the community is of paramount concern, and we are uncertain of how the acceptance of third-party non-utility power generation into the grid on a large-scale basis and from multiple independent sources might impact the integrity of the grid, the safety of our members and the cost to consumers. The public utilities commission recently re-opened discussions (Public Utilities Commission Docket No. 2024-0200) to explore some of the general concepts proposed in HB790 on an intra-governmental basis, but have yet to provide its findings.

IBEW1260 believes that ongoing efforts by the PUC to explore intra-governmental wheeling should not be circumvented by legislation, and that their findings should be received and reviewed prior to any efforts to consider establishing micro grids and retail wheeling policies and procedures. Prematurely expanding the number of intermittent power providers feeding into and out of the grid may adversely impact an electric utility's ultimate accountability to the public, and compromise an electric utility's ability to provide firm, safe, and reliable energy to the people of Hawai'i. As such we respectfully request that you HOLD this measure and allow the PUC to complete its open docket and issue its findings on this matter before further action is taken.

Mahalo for the opportunity to testify.

**HB-790**

Submitted on: 2/1/2025 2:24:00 PM

Testimony for EEP on 2/4/2025 9:00:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
PAUL OREM	Photonworks Engineering	Support	Written Testimony Only

Comments:

*Aloha Chair Lowen; Vice Chair Perruso, and committee members:*

*As an invested stakeholder in Hawaii's clean energy transition, I strongly support HB790. This legislation sets an ambitious but achievable target for rooftop solar and energy storage installations that will help Hawaii and its residents achieve critical affordability, reliability, resilience and sustainability goals.*

*Mahalo for hearing this critically important bill and providing me the opportunity to testify. Please advance HB790.*

*Respectfully,*

*Paul Orem - CEO*

**HB-790**

Submitted on: 2/1/2025 3:04:54 PM

Testimony for EEP on 2/4/2025 9:00:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Charles Chacko	Credence Projects LLC	Support	Written Testimony Only

Comments:

Aloha Chair Lowen; Vice Chair Perruso, and committee members:

As an invested stakeholder in Hawaii's clean energy transition, I strongly support HB790. This legislation sets an ambitious but achievable target for rooftop solar and energy storage installations that will help Hawaii and its residents achieve critical affordability, reliability, resilience and sustainability goals.

Mahalo for hearing this critically important bill and providing me the opportunity to testify. Please advance HB790.

Respectfully,

**HB-790**

Submitted on: 2/2/2025 9:27:38 AM

Testimony for EEP on 2/4/2025 9:00:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Anthony Amendola	Energy Advisors, LLC	Support	Written Testimony Only

Comments:

February 2, 2025

RE: HB790-DER Acceleration

Aloha Chair Lowen; Vice Chair Perruso, and committee members:

I am writing in strong support of HB790-DER Acceleration. As President and CEO of Energy Advisors, LLC, now the largest mid-level commercial financier of solar PV projects in Hawaii, this bill will be critical to continued success of renewable energy in Hawaii. We routinely save our customers, your constituents, millions of dollars annually in energy costs. In addition, we and our partners are creating hundreds of living wage jobs in Hawaii, that is NOT tourism related, an important goal in Hawaii for occupation diversity outside of tourism.

This legislation sets an ambitious but achievable target for rooftop solar and energy storage installations that will help Hawaii and its residents achieve critical affordability, reliability, resilience and sustainability goals.

This underserved market, such as Big Island, offers an attractive opportunity to lower costs and increase resilience for businesses as well as residents in condominiums, many of whom are low-to-moderate income (LMI). For Honolulu and Hawaii to achieve critical renewable energy and resilience goals, and to protect our citizens from an increasingly expensive and unreliable grid, we need to maximize solar on every rooftop. Removing the barriers to solar permitting for businesses and condos is essential. Please advance this bill.

Thank you for providing me with the opportunity to testify in STRONG SUPPORT of HB790.  
Respectfully,

"Making Sustainability Profitable"

Energy Advisors provides turn-key building improvement solutions through the development and funding of renewable energy, energy efficiency, EV Charging, and capital improvements in Hawai'i.





P.O. Box 37158, Honolulu, Hawai`i 96837-0158  
Phone: 927-0709 [henry.lifeoftheland@gmail.com](mailto:henry.lifeoftheland@gmail.com)

## COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Rep. Nicole E. Lowen, Chair

Rep. Amy A. Perruso, Vice Chair

DATE: Tuesday, JanFebruary 4, 2025

TIME: 9:00 AM

Conference Room 325

HB 790 RELATING TO RENEWABLE ENERGY. Amend or Hold

Aloha Chair Lowen, Vice Chair Perruso, and Members of the Committee

Life of the Land is Hawai`i's own energy, environmental and community action group advocating for the people and `aina for 55 years. Our mission is to preserve and protect the life of the land through sound energy and land use policies and to promote open government through research, education, advocacy and, when necessary, litigation.

### **The proposed bill has several errors and promotes Reverse Robin Hood policies**

"The legislature finds that to ensure grid stability and system resilience, Hawaii must invest in distributed energy resource grid service programs, microgrids, community-based or shared renewable energy programs, and retail wheeling."

While they may be desired, none of them are required to ensure grid stability and system resilience

“Retail wheeling allows customer to purchase electricity from competitive suppliers expeditiously, further promoting consumer choice, cost savings, and energy independence.”

The Public Utilities Commission has an open docket examining intragovernmental wheeling. Full retail wheeling should only be considered if (a) intragovernmental wheeling proves feasible, (b) full retail wheeling is thoroughly reviewed in a PUC proceeding, and (c) equity and cost shifting issues are fully analyzed.

“Notwithstanding any law to the contrary, energy exported to the electric grid past a participating customer-generator's point of common coupling from photovoltaic solar systems paired with energy storage as part of a grid service program shall be credited at the full retail rate of electricity for the relevant time period.”

This is a reverse Robin Hood provision. LOL strongly opposes this as it would force economically challenged individuals to subsidize those who can afford solar and storage systems.

The average full retail rate and the retail time-of-use rate for rooftop solar is two-to-four times higher than electricity from independent power producers with solar and storage facilities.

“No later than , 2025, the public utilities commission shall establish, by rule or order, policies and procedures to implement retail wheeling.”

The timeframe is way too short.

“Microgrids and shared renewable energy systems enable localized energy generation and resilience.”

Shared renewable energy systems (community-based renewable energy) can have dozens of miles between the generator and the consumer.

Mahalo

Henry Curtis  
Executive Director



Testimony Before the House Committee on Energy & Environmental Protection

By David Bissell  
President and Chief Executive Officer  
Kaua'i Island Utility Cooperative  
4463 Pahe'e Street, Suite 1, Līhu'e, Hawai'i, 96766-2000

Tuesday, February 4, 2025; 9:00 am  
Conference Room #325 & Videoconference

**House Bill No. 790 – RELATING TO RENEWABLE ENERGY**

To the Honorable Chair Nicole Lowen, Vice Chair Amy Perruso, and Members of the Committee:

Kaua'i Island Utility Cooperative (KIUC) is a not-for-profit utility providing electrical service to more than 34,000 commercial and residential members.

**KIUC opposes this measure.**

Over the past 10 years, KIUC has significantly increased its renewable generation. In 2010, KIUC's energy mix included 10% renewable. Over the past five years, renewable production on Kaua'i has averaged between 50% and 70%. In addition, since 2019 KIUC has operated the Kaua'i electric grid at 100% renewable for thousands of hours on sunny days. KIUC's renewable mix currently includes biomass, biofuels, hydropower, utility-scale solar, utility-scale paired with battery energy storage systems (BESS), and distributed (rooftop) solar.

Specific to its solar generating capacity, KIUC currently has 119.7 megawatts of total solar generating capacity: roughly 35% of which comes from rooftop solar. The number of rooftop solar systems on Kaua'i has risen from 388 in 2010 to more than 6,500 today. Of that total, 2,100 have batteries. In 2024 KIUC members added 498 new rooftop solar systems with 323 members adding a battery storage component to either new or existing systems.

KIUC's board of directors has set a goal of reaching 100% renewable by 2033, twelve years ahead of the State of Hawai'i mandate. We have identified a viable path to reaching that goal via a combination of additional utility scale solar + BESS projects, projected continued growth in the number of member-owned rooftop solar systems, and expanded use of biofuels.

It is important to note that the unique circumstances of each of Hawai'i's distinct island grids must be considered when determining the relative value of customer-sited distributed energy resources. While an island like O'ahu is land-constrained and will presumably need to take advantage of as much rooftop space as possible to reach mandated renewable targets, the same is not true for Kaua'i. KIUC has taken advantage of the availability of tens of thousands of acres of fallow, sub-standard agricultural lands to develop utility-scale solar projects under long-term, fixed-price power purchase agreements.

As a result, KIUC's rates went from being the highest in the state to the lowest when Kaua'i hit its peak renewable generating capacity between 2021 and 2024. This is directly attributable to the relatively low cost of solar generated by utility-scale solar projects brought online between 2015 and 2021.

While KIUC recognizes that supporting the expansion of distributed energy resources offers many benefits, it is important to remember that not all residents have the financial resources or ability to take advantage of rooftop solar. To that point, it is in the best interest of all KIUC's members that we maximize use of the lowest-cost solar resources, which are typically our utility-scale projects. Costs for various solar resources in January 2025 are as follows:

- ✓ AES Lāwa'i solar plus storage: \$0.11 per kWh
- ✓ AES PMRF solar plus storage: \$0.1085 per kWh
- ✓ Schedule Q customer energy credit payment rate: \$0.15993 per kWh (*Schedule Q rates are equivalent to the rate paid to KIUC's other non-renewable fueled energy, otherwise known as "avoided cost"*)

Per our current tariff, it is typical for Schedule Q customers to receive a premium of roughly 50% above the PPA prices for our utility-scale projects. If Schedule Q customers were to be compensated at retail rates, as proposed in HB 790, that premium in January 2025 would be roughly four times the amount paid to independent power producers such as AES. This increased cost would be borne by all of KIUC's customers, creating a significant inequity that is especially burdensome on low- and moderate-income members who can't afford to take advantage of Schedule Q. Utility-scale solar + BESS projects also deliver benefits such as: providing hundreds of hours of dispatchable, firm power during non-solar hours, offering the ability to power localized microgrids during outages, and contributing significantly to grid reliability.

KIUC does agree that distributed solar and battery systems can be of benefit to customers in the event of power outages or disasters. We believe our current tariff and interconnection policies are providing adequate incentive to continue to expand the number of distributed resources, while protecting customers who can't install rooftop solar from significantly subsidizing those who can.

It is also important to note that the concept of wheeling is currently being explored in a docket before the Hawai'i Public Utilities Commission (PUC), with recommendations on wheeling due to be presented to the legislature in time for the 2026 legislative session.

In the event this legislation progresses, KIUC would recommend that member-owned electric cooperatives be exempted from its provisions. Cooperatives are extremely concerned about equity amongst their customer owners, and developing fair distributed solar rates for any recommended tariff changes is appropriately done within the cooperative structure. As an alternative, KIUC recommends that the PUC be directed to conduct a study on the relative benefits of grid export from distributed solar on an island-by-island basis. Following such a study, an appropriate tariff system can be developed that fairly compensates distributed energy providers, while recognizing each island's different load characteristics and renewable energy resources.

Mahalo for the opportunity to comment.

**HB-790**

Submitted on: 2/3/2025 6:56:40 AM

Testimony for EEP on 2/4/2025 9:00:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Marc Monbouquette	Enphase Energy, Inc.	Support	Written Testimony Only

Comments:

Aloha Chair Lowen; Vice Chair Perruso, and committee members:

On behalf of Enphase Energy, a leading manufacturer of customer-sited distributed energy technologies helping lead Hawaii's clean energy transition, I would like to indicate my strong support of HB790. This legislation sets an ambitious but achievable target for rooftop solar and energy storage installations that will help Hawaii achieve its affordability, reliability, resilience, and sustainability goals.

Mahalo for hearing this critically important bill and providing me the opportunity to testify. Please advance HB790.

Respectfully,

Marc Monbouquette



**Hawaii Solar Energy Association**  
*Serving Hawaii Since 1977*

**Testimony of the Hawaii Solar Energy Association (HSEA) Regarding HB790, Relating to Renewable Energy, Before the House Committee on Energy and Environmental Protection**

**Tuesday, February 4, 2025**

Aloha Chair Lowen, Vice Chair Perruso, and committee members,

The Hawaii Solar Energy Association (HSEA) **strongly supports HB790**, which sets a goal of 50,000 new distributed solar and battery storage installations over the next five years and directs the Public Utilities Commission (PUC) to design programs with sufficiently-calibrated incentives and mechanisms to achieve this target, ensuring Hawaii maintains its path to 100% renewable energy while addressing urgent and immediate grid needs.

**Why This Bill is Critical**

Hawaii's energy future depends on distributed energy resources (DERs) such as rooftop solar and energy storage to lower energy costs, stimulate economic growth, enhance resilience, and meet climate goals. By deploying 50,000 solar and battery storage systems in five years, this bill secures Hawaii's leadership in renewable energy while delivering broad benefits for all residents.

**Lower Energy Costs:** Rooftop solar and battery storage significantly reduce energy bills and shield customers from fossil fuel price volatility. By producing local energy, DERs ease grid strain and defer costly infrastructure upgrades, saving money for all ratepayers. Fair compensation for energy exports and other values ensures customers are rewarded equitably, encouraging widespread adoption of beneficial grid services programs.

**Economic Benefits:**

- According to the State of Hawaii's Department of Business, Economic Development, and Tourism's (DBEDT) Research and Economic Analysis Division (READ), every dollar invested in construction of DERs generates 1.47- 2.12 additional dollars in direct economic output.<sup>1</sup>

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<sup>1</sup> See DBEDT-READ 2017 *State Input-Output Study and Condensed Input-Output Transactions Table*, 'mining and construction' category. ([https://dbedt.hawaii.gov/economic/reports\\_studies/2017-io/](https://dbedt.hawaii.gov/economic/reports_studies/2017-io/))



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- A recent peer-reviewed economic analysis indicates even higher multiplier benefits with residential solar yielding 2.5-3.0x on each dollar invested and commercial systems returning 3.5-4.0x.<sup>2</sup>
- Hawaii's clean energy sector supports over 3,000 jobs, with thousands more expected as DER adoption grows. Each added megawatt of residential solar is estimated to add 27 jobs while each added megawatt for commercial adds 19 jobs.<sup>3</sup>
- State investments are highly leveraged, attracting an additional \$3.44 in private and federal funding for every state dollar.<sup>4</sup>

**Resilience and Reliability:** DERs strengthen energy security with the use battery storage and microgrids, providing localized power during emergencies and mitigating risks from aging infrastructure. Virtual Power Plants (VPPs) such as Hawaii's Battery Bonus or Bring-You-Own-Device (BYOD) programs aggregate DERs to enhance grid stability by offering peak load reduction and energy adequacy. Events like the 2023 Lahaina wildfires, and energy adequacy issues on Oahu and Hawaii Island, underscore the urgent need for resilient, decentralized energy systems.

**Climate Leadership:** DERs are vital to achieving Hawaii's 100% Renewable Portfolio Standard (RPS) by 2045, already contributing nearly half of the progress to date. By reducing reliance on imported fossil fuels, DERs lower greenhouse gas emissions and improve public health, especially in underserved and frontline communities disproportionately affected by pollution and climate risks. Hawaii's leadership also serves as a global model for decarbonizing energy systems, which we can harness to drive new opportunities for Hawaii's future economy.

**State Action is Crucial:** With uncertain federal support and potential tariffs on solar equipment increasing costs for Hawaii consumers, bold state-level action is imperative. This bill ensures affordable and accessible clean energy solutions for residents.

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<sup>2</sup> Thomas A. Laudat and Prahlad Kasturi, 2017. "[The Economic and Fiscal Impacts of Hawaii's Solar Tax Credit.](#)" *International Journal of Energy Economics and Policy, Econjournals*, vol.7(1), pages 224-252.

<sup>3</sup> [Solar Foundation National Solar Jobs Census 2020](#); [SEIA Solar Market Insight Report 2020](#); and Bill Nussey, [Freeing Energy.](#)

<sup>4</sup> Based on the refundable tax credit rate of 22.5%, leaving 77.5% from other sources, private and federal. 77.5 divided by 22.5 equals 3.44.



**Hawaii Solar Energy Association**  
*Serving Hawaii Since 1977*

**Opportunities for Hawaii**

Hawaii’s leadership in DERs presents significant opportunities for economic and technological advancement. Sharing expertise in DER policy, microgrids, and VPPs with other states and nations positions Hawaii as a hub for renewable energy innovation. A robust DER ecosystem also attracts emerging industries in data-driven sectors that rely on sustainable and resilient energy.

The “50,000 in Five” initiative offers transformative economic benefits, potentially injecting billions into Hawaii’s economy, supporting small businesses, and creating thousands of green jobs. This effort will solidify Hawaii’s status as a global clean energy leader while fostering long-term economic sustainability and environmental stewardship.

**Conclusion**

HSEA urges these committees to advance SB589 to accelerate Hawaii’s clean energy transition. This bill will lower energy costs, drive economic growth, strengthen resilience, and achieve critical climate goals. By prioritizing fair compensation, robust incentives, and innovative grid solutions, Hawaii can continue to lead in clean energy innovation while ensuring equitable benefits for all residents.

Thank you for the opportunity to testify in **strong support of HB790**. HSEA remains committed to working with the legislature, PUC, utilities, and stakeholders to advance Hawaii’s clean energy and resilience goals.

Respectfully submitted,

***/s/ Rocky Mould***

Executive Director

**About HSEA**

Since 1977, HSEA has been advocating for policies that help Hawaii achieve critical climate, energy security, and resilience goals by enabling residents and businesses to invest in and





**Hawaii Solar Energy Association**  
*Serving Hawaii Since 1977*

benefit from the transition to clean energy. These investments provide reliable and affordable power, reducing energy cost burdens and contributing to Hawaii's economic sustainability as we decarbonize our economy and electric grid.

HSEA's membership includes the majority of locally owned and operated solar and energy storage companies doing business in Hawaii, along with leading global cleantech manufacturers and service providers active in our market. Together, we employ thousands of Hawaii residents in diverse green economy jobs that drive innovation, design, and construction of Hawaii's renewable energy infrastructure.

Hawaii is a global leader in renewable energy deployment, particularly in customer-sited rooftop solar and energy storage. Customer-sited rooftop solar accounts for 47% of renewable energy added to grids in Hawaiian Electric service areas (Oahu, Maui County, and the Big Island) and 21% in the Kauai Island Utility Cooperative area. Additionally, Hawaii leads the nation in pairing rooftop solar with battery storage, with 96% of new residential installations including storage. These achievements underscore Hawaii's role as a pioneer in clean energy transformation.



# HOLU HOU ENERGY

COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Representative Nicole E. Lowen, Chair

Representative Amy A. Perruso, Vice Chair

DATE: Tuesday, February 4, 2025

TIME: 9:00am

PLACE: VIA VIDEOCONFERENCE & Conference Room 325

Theodore (Ted) Peck  
President, Holu Hou Energy  
99-1026 Iwaena Street  
Aiea, HI 96701

RE: HB 790 RELATING TO RENEWABLE ENERGY.

Aloha Chair Lowen, Vice Chair Perruso and Members of the Committees

Thank you for the opportunity to provide supporting testimony on this bill. My name is Ted Peck. I am the former Energy Administrator for the State of Hawaii, and have been working in energy development for the last 14 years. I have over 30 years of experience with energy and technology. My company, Holu Hou Energy, develops solar energy projects in Hawaii, focusing on low income, difficult to serve customers, especially in multi-dwelling projects such as rentals (two income and market) and condominium developments.

I am in strong support of this measure, but want to address a single issue highlighted in this bill. Much has been made about the discussion around retail compensation during grid services. It has been called a return to NEM, and criticized in many corners, mostly captured in <http://www.lilani.media/2025/01/how-valuable-is-more-daytime-solar.html>. What is not understood in these criticisms is that the owner of the system has a choice – deliver the energy against their own load to displace utility energy **purchased at retail rates** during the period of service to the grid (i.e. *“Notwithstanding any law to the contrary, energy exported to the electric grid past a participating customer-generator's point of common coupling from photovoltaic solar systems paired with energy storage as part of a grid service program shall be credited at the full retail rate of electricity for the relevant time period.”*) or serve the grid at their opportunity cost. That cost is at retail rate. Note that this rate is only during the period when the DER system is serving the grid by exporting energy during the activation period of the grid service. Comparisons to rates of energy delivered by power purchase agreements (PPAs) are an apple or orange comparison, as those PPAs are not delivering the grid services, which are of a higher value than simple energy delivery. We have seen that a higher rate of compensation was necessary for the success of Battery Bonus, and that a lower rate of compensation for the BYOD program made for a failed program.

Thank you for the opportunity to testify and for your time in considering my comments.

Respectfully,  
Ted Peck  
President, Holu Hou Energy

**HB-790**

Submitted on: 2/2/2025 9:38:47 PM

Testimony for EEP on 2/4/2025 9:00:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Tristan Bates	Individual	Support	Written Testimony Only

Comments:

*As an invested stakeholder in Hawai‘i’s clean energy transition, I strongly support HB790. This legislation sets an ambitious but achievable target for rooftop solar and energy storage installations that will help Hawai‘i and its residents achieve critical affordability, reliability, resilience and sustainability goals.*

**HB-790**

Submitted on: 2/1/2025 1:46:02 PM

Testimony for EEP on 2/4/2025 9:00:00 AM

Submitted By	Organization	Testifier Position	Testify
Radford Nakamura	Individual	Support	Written Testimony Only

Comments:

*Aloha Chair Lowen; Vice Chair Perruso, and committee members:*

*As an invested stakeholder in Hawaii's clean energy transition, I strongly support HB790. This legislation sets an ambitious but achievable target for rooftop solar and energy storage installations that will help Hawaii and its residents achieve critical affordability, reliability, resilience and sustainability goals.*

*Mahalo for hearing this critically important bill and providing me the opportunity to testify. Please advance HB790.*

*Respectfully,*

*Radford Nakamura*

**HB-790**

Submitted on: 2/3/2025 7:31:38 AM

Testimony for EEP on 2/4/2025 9:00:00 AM

Submitted By	Organization	Testifier Position	Testify
wei lian	Individual	Support	Written Testimony Only

Comments:

*Aloha Chair Lowen; Vice Chair Perruso, and committee members:*

*As an invested stakeholder in Hawaii's clean energy transition, I strongly support HB790. This legislation sets an ambitious but achievable target for rooftop solar and energy storage installations that will help Hawaii and its residents achieve critical affordability, reliability, resilience and sustainability goals.*

*Mahalo for hearing this critically important bill and providing me the opportunity to testify. Please advance HB790.*

*Respectfully,*

*Wei Lian*

**HB-790**

Submitted on: 2/3/2025 8:04:47 AM

Testimony for EEP on 2/4/2025 9:00:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Chris DeBone	Individual	Support	Written Testimony Only

Comments:

Aloha Chair Lowen; Vice Chair Perruso, and committee members:

As an invested stakeholder in Hawaii's clean energy transition, I strongly support HB790. This legislation sets an ambitious but achievable target for rooftop solar and energy storage installations that will help Hawaii and its residents achieve critical affordability, reliability, resilience and sustainability goals.

Mahalo for hearing this critically important bill and providing me the opportunity to testify. Please advance HB790.

Respectfully,

Chris DeBone, Hawaii Energy Connection (aka. KumuKit Solar)

**HB-790**

Submitted on: 2/3/2025 8:20:56 AM

Testimony for EEP on 2/4/2025 9:00:00 AM

Submitted By	Organization	Testifier Position	Testify
Faith Texeira	Individual	Support	Written Testimony Only

Comments:

*Aloha,*

*As an invested stakeholder in Hawaii's clean energy transition, I strongly support HB790. This legislation sets an ambitious but achievable target for rooftop solar and energy storage installations that will help Hawaii and its residents achieve critical affordability, reliability, resilience and sustainability goals.*

*Mahalo for hearing this critically important bill and providing me the opportunity to testify. Please advance HB790.*

**HB-790**

Submitted on: 2/1/2025 3:54:41 PM

Testimony for EEP on 2/4/2025 9:00:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Jeffrey Lum	Individual	Support	Written Testimony Only

Comments:

*Aloha Chair Lowen; Vice Chair Perruso, and committee members:*

*As an invested stakeholder in Hawaii's clean energy transition, I strongly support HB790. This legislation sets an ambitious but achievable target for rooftop solar and energy storage installations that will help Hawaii and its residents achieve critical affordability, reliability, resilience and sustainability goals.*

*Mahalo for hearing this critically important bill and providing me the opportunity to testify. Please advance HB790.*

*aloha, Jeff Lum*



**HB-790**

Submitted on: 2/3/2025 9:16:29 AM

Testimony for EEP on 2/4/2025 9:00:00 AM

Submitted By	Organization	Testifier Position	Testify
Miles	Individual	Support	Written Testimony Only

Comments:

*Aloha Chair Lowen; Vice Chair Perruso, and committee members:*

*As an invested stakeholder in Hawaii's clean energy transition, I strongly support HB790. This legislation sets an ambitious but achievable target for rooftop solar and energy storage installations that will help Hawaii and its residents achieve critical affordability, reliability, resilience and sustainability goals.*

*Mahalo for hearing this critically important bill and providing me the opportunity to testify. Please advance HB790.*

*Respectfully,*

*Miles Yoshimoto*