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Testimony of the Department of Commerce and Consumer Affairs

**Before the
House Committee on Energy & Environmental Protection
Tuesday, March 14, 2023
9:30 a.m.
Conference Room 325**

**On the following measure:
S.B. 839, S.D. 2, RELATING TO RENEWABLE ENERGY**

Chair Lowen, and Members of the Committee:

My name is Dean Nishina, and I am the Acting Executive Director for 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 the Hawaii Electricity Reliability Surcharge Special Fund; and (2) require the Public Utilities Commission (Commission) to establish reliability standards and interconnection requirements for all users, owners, or operators of the Hawaii electric system and determine the responsibility of costs associated with any reliability standards or inter-connection requirements. The bill also requires the Commission to establish: (1) the distinction between interconnection facilities and utility network upgrades; (2) that the cost of interconnection facilities shall be the responsibility of the interconnection customer; and (3) that the cost of utility network upgrades shall be the sole responsibility of the transmission provider. In addition, the bill (1) establishes a timeline and requirements for interconnection procedures to be

established by the Commission for certain utility—scale renewable energy projects: (2) requires implementation of the Hawaii Electricity Reliability Administrator Law upon establishment of the Hawaii Electricity Reliability Administrator Surcharge; (3) beginning 1/1/2024, requires the surcharge to be imposed on certain customers to cover the costs of the Administrator to be deposited into the Hawaii Electricity Reliability Surcharge Special Fund Subaccount; (4) requires the Commission to submit a report and assessment of the Hawaii Electric Reliability Administrator to the Legislature; and (5) appropriates funds.

The Department appreciates the intent of this bill to expedite the timeline and procedures for interconnection in order to facilitate the development of renewable energy projects. The Department offers that the Hawaiian Electric Companies have recently adopted certain changes in procedures to help expedite interconnection of utility scale projects and also notes that the Commission recently approved certain measures in Docket No. 2018-0088 that are meant to provide incentives to encourage expedited completion of interconnection facilities and penalties if interconnections are delayed. The Department respectfully suggests that it may be prudent to allow evaluation of these measures to determine whether they adequately address matters that are within the control of the utility and developer to complete interconnections on a timely basis. If, however, the proposed bill is enacted, the Department offers that the recently adopted performance incentive mechanism related to expediting interconnections will need to be revisited as it would be unreasonable for customers to bear the costs of performance incentive rewards related to the Hawaiian Electric Companies compliance with statutory mandates.

In addition, the Department offers that the proposed measure may have some unintended consequences. To explain, interconnection requirements generally depend on various types of factors, such as the type, size, and other characteristics of the facility, to name a few examples. The interconnection requirements may also need to consider location specific factors. Establishing standard requirements may result in either very conservative standards to mitigate concerns with reliability impacts, which could discourage third party developers from submitting proposed projects, or reliability

concerns may arise if the interconnection requirements do not adequately address system conditions, which would be contrary to safe and reliable electric services to customers.

If this measure passes, however, the Department appreciates how the S.D. 2 version has retained the language that allows the Commission the authority and flexibility to determine who should bear the costs associated with reliability standards or interconnection requirements. This language mitigates the possibility that such costs would automatically be assumed to be recovered from the utility company, where those costs would ultimately be recovered from consumers.

Finally, while the Department supports the requirement of having a reliable energy grid for each of the islands, the Department has concerns with the requirement that a reliability administrator will be hired and the potential impacts on customers' bills. While well intentioned, if Hawaii is required to adopt a reliability administrator whose role may be akin to a regional transmission organization, such as the California ISO or New England ISO, this will likely result in a significant increase in customer bills without commensurate value. The value of such transmission organizations or administrators is to facilitate the interconnection of different utility systems and merchant power stations on a level playing field. Since Hawaii is not interconnected to any other utility systems and interconnections between islands do not exist, imposing a transmission organization structure on each island will be a costly exercise that will not deliver value to customers – only increases in the utility bills.

Thank you for the opportunity to testify on this bill.

TESTIMONY OF
LEODOLOFF R. ASUNCION, JR.
CHAIR, PUBLIC UTILITIES COMMISSION
STATE OF HAWAII

TO THE
HOUSE COMMITTEE ON

ENERGY & ENVIRONMENTAL PROTECTION

Tuesday, March 14, 2023
9:30 a.m.

Chair Lowen, Vice Chair Cochran, and Members of the Committees:

MEASURE: S.B. No. 839, SD 2

TITLE: RELATING TO RENEWABLE ENERGY.

DESCRIPTION: Establishes the Hawai'i Electricity Reliability Surcharge Special Fund. Requires the Public Utilities Commission to establish reliability standards and interconnection requirements for all users, owners, or operators of the Hawai'i electric system and determine the responsibility of costs associated with any reliability standards or inter-connection requirements. Requires the Public Utilities Commission to establish: (1) the distinction between interconnection facilities and utility network upgrades; (2) that the cost of interconnection facilities shall be the responsibility of the interconnection customer; and (3) that the cost of utility network upgrades shall be the sole responsibility of the transmission provider. Establishes a timeline and requirements for interconnection procedures to be established by the Public Utilities Commission for certain utility-scale renewable energy projects. Requires implementation of the Hawai'i Electricity Reliability Administrator Law upon establishment of the Hawai'i Electricity Reliability Administrator Surcharge. Beginning 1/1/2024, requires the surcharge to be imposed on certain customers to cover the costs of the Administrator to be deposited into the Hawai'i Electricity Reliability Surcharge Special Fund Subaccount. Requires the Public Utilities Commission to submit a report and assessment of the Hawai'i Electric Reliability Administrator to the Legislature. Appropriates funds. (SD2)

POSITION:

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

COMMENTS:

The Commission appreciates the intent of this measure and consideration of the Commission's previous testimony before the Senate Committees on Energy, Economic Development, and Tourism, and Ways and Means. The Commission is committed to overseeing a timely and transparent interconnection process, while acknowledging the need for review and approvals from numerous local and State agencies, community acceptance for development, consideration of ratepayer impacts, and achievement of the State's energy goals. The Commission has remaining concerns and requests reconsideration of the Commission's comments relating to certain sections of this measure.

This bill raises several issues that were previously addressed in Act 201 SLH 2022, which directed the Commission to conduct a study related to the interconnection practices of Hawaiian Electric.¹ **Key findings from this study pertain to multiple assertions made in this bill, which the Commission believes make Sections 3, 4, 5 and 6 of this bill unnecessary and would place additional costs on customers for work that is already underway.**

Relating to Section 3, the Act 201 study recommends that the Commission revisit the efforts to establish reliability standards for electric utilities. The Commission does agree that establishing grid reliability standards may provide the benefits the legislature puts forth in this bill. The Commission strongly believes that flexibility must be preserved in any reliability standards that are adopted. Establishing strict reliability standards and interconnection requirements can limit the ability to design projects using the most up to date industry practices and achieve optimal reliability and cost-effectiveness.

Related to Section 4, the Act 201 report describes the existing interconnection procedure which is approved by the Commission for use in Hawaiian Electric's procurement of renewable energy projects. This procedure mirrors the elements outlined in Section 4 of this bill. Furthermore, the Commission recently adopted a Performance Incentive Metric that incents timely completion of this interconnection procedure, with penalties for delays that are within Hawaiian Electric's control.

¹ The first phase of the Act 201 Study is available on the Commission's website, available at <https://puc.hawaii.gov/wp-content/uploads/2022/12/Act-201-Report-with-Attachment.pdf>.

The Commission will continue to regulate interconnection procedures and costs and will utilize the Independent Engineer to provide additional scrutiny on the justification and reasonableness of interconnection costs that are allocated to the interconnecting customers. In its regulation of cost allocation, it is the Commission's role to ensure the most cost-effective and fair means of providing power to customers.

Relating to Sections 5 and 6, the Commission believes that the reliability standards can be established by leveraging current and past proceedings before the Commission, along with the expertise of the Independent Engineer. The Commission offers for consideration that making the establishment of the Hawaii Electricity Reliability Administrator ("HERA") mandatory would result in unnecessary additional costs to ratepayers, via the applicable surcharge. An investigation into establishing reliability standards could instead be opened to determine the most cost-effective way to achieve the goals laid out in this bill. Accordingly, the Commission recommends removing the requirement to establish the HERA in light of the Commission's decision to hire an Independent Engineer and in an effort to mitigate additional costs to ratepayers to fund the HERA.

Finally, the Commission acknowledges that the second phase of the Act 201 study is underway this year to further investigate matters related to interconnection procedures, timelines, and costs. Recognizing the Legislature's continued interest in investigating these topics, the Commission requests consideration for appropriating additional funds to be spent on the remaining items of the Act 201 study which will largely come from the Commission's budget and may place constraints on the scope of the Independent Engineer, who is currently devoting great time and energy to overseeing and improving the Stage 3 RFP. This will allow the Independent Engineer and the Commission to take the steps necessary to improve the interconnection process and establish reliability standards.

Thank you for the opportunity to testify on this measure.

SB-839-SD-2

Submitted on: 3/11/2023 11:11:56 AM

Testimony for EEP on 3/14/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Tiffany Dame	Citizens' Caucus	Comments	Written Testimony Only

Comments:

Citizens Caucus is concerned that this bill will result in higher bills for ratepayers. Hawaii ratepayers already have the highest electricity bills in the Nation, the last thing they need is another surcharge. Also, we are not convinced that this bill is needed. We are very troubled by the numerous bills that have been introduced this and last Session that attempt to micro-manage the PUC. Please let the PUC do their job.

Mahalo,

TD, President



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COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Rep. Nicole E. Lowen, Chair
Rep. Elle Cochran, Vice Chair

DATE: Tuesday, March 14, 2023
TIME: 9:30 AM
Conference Room 325

SB1154 SD1 Relating to Energy

Opposition

Aloha Chairs Lowen, Vice Chair Elle Cochran and Members of the Committees

Life of the Land is Hawai'i's own energy, environmental and community action group advocating for the people and `aina for 53 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 Public Utilities Commission and Hawaiian Electric Company are seeking ways to reduce the cost and time spent on the interconnection process. This is being accomplished through the PUC proceeding to "review Hawaiian Electric's interconnection process and transition plans," the Powering Past Coal Task Force, the docket examining HECO's RFPs for renewable energy, and Act 201 SLH 2022.

This bill dismisses these actions and proposes an unworkable solution.

The bill is opposed by HECO. The Public Utilities Commission and the Consumer Advocate filed strongly worded comments stressing the flaws in the bill.

This bill received support from Hu Honua backer Hawaii Clean Power Alliance that shares an address with Hu Honua's attorneys and is described by DCCA as a "business is not in good standing."¹

The bill asserts "the legislature also finds that the State does not regulate interconnection costs." This is false.

The bill asserts that all interconnection costs on the utility side of the transfer point should be paid for by ratepayers even if the line is not needed and somehow this will reduce costs for ratepayers.

The bill implies that if a massive geothermal facility is built in Puna tied a Puna substation that is interconnected to the HELCO and HECO grids, the cost of the transmission line from Puna to O`ahu should not be factored into the price paid to the geothermal facility. Rather, ratepayers should save money by financing the billion-dollar transmission line.

The bill ignores delays and cost escalations caused by COVID-19, supply chain disruptions, inflation, and other exogenous factors caused delays. "Electric public utility companies are experiencing interconnection delays that increase development costs and extend renewable project timelines."

¹ <https://hbe.ehawaii.gov/documents/business.html?fileNumber=290753D2>

PUC: “This bill raises several issues that were previously addressed in Act 201 SLH 2022, which directed the Commission to conduct a study related to the interconnection practices of Hawaiian Electric. Key findings from this study pertain to multiple assertions made in this bill, which the Commission believes make the provisions of this bill unnecessary. Relating to Section 1, the Act 201 study finds that the Commission is already regulating interconnection costs through its jurisdiction over the utility’s tariffs and rules regarding interconnection cost definitions and responsibilities.”

Henry Curtis
Executive Director



Email: communications@ulupono.com

HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
Tuesday, March 14, 2023 — 9:00 a.m.

Ulupono Initiative offers comments on SB 839 SD2, Relating to Renewable Energy.

Dear Chair Lowen and Members of the Committee:

My name is Micah Munekata, and I am the Director of Government Affairs at Ulupono Initiative. We are a Hawai'i-focused impact investment firm that strives to improve the quality of life throughout the islands by helping our communities become more resilient and self-sufficient through locally produced food, renewable energy and clean transportation choices, and better management of freshwater resources.

Ulupono offers comments on SB 839 SD2, which establishes the Hawai'i Electricity Reliability Surcharge Special Fund; requires the Public Utilities Commission to establish reliability standards and interconnection requirements for all users, owners, or operators of the Hawai'i electric system and determine the responsibility of costs associated with any reliability standards or inter-connection requirements; requires the Public Utilities Commission to establish: (1) the distinction between interconnection facilities and utility network upgrades; (2) that the cost of interconnection facilities shall be the responsibility of the interconnection customer; and (3) that the cost of utility network upgrades shall be the sole responsibility of the transmission provider; establishes a timeline and requirements for interconnection procedures to be established by the Public Utilities Commission for certain utility-scale renewable energy projects; requires implementation of the Hawaii Electricity Reliability Administrator Law upon establishment of the Hawai'i Electricity Reliability Administrator Surcharge; beginning 1/1/2024, requires the surcharge to be imposed on certain customers to cover the costs of the Administrator to be deposited into the Hawaii Electricity Reliability Surcharge Special Fund Subaccount; and, requires the Public Utilities Commission to submit a report and assessment of the Hawai'i Electric Reliability Administrator to the Legislature.

Ulupono notes that the latest set of amendments generally improve the bill. An additional modification that may be needed is to remove the clause that starts with "provided that any costs for changes in reliability standards" and ends with "been approved by the Public Utilities Commission" because that is no longer accurate based on the amendments.

Investing in a Sustainable Hawai'i

Ulupono is acutely aware of the fact that interconnection costs and uncertainty over those costs has been a top concern for renewable energy developers for many years now. However, just last year in the Performance-Based Regulation docket, the Public Utilities Commission closely considered interconnection timeliness, costs, and related issues. Based on that examination, and with significant and broad stakeholder input, the Commission put in place a new Performance Incentive Mechanism (PIM) that has both financial penalties for slow interconnections and financial rewards for unusually quick/timely interconnections. The utility now has a direct, financial incentive to interconnect renewable energy projects as quickly as possible. Similarly, the utility also has a reliability PIM so there are financial incentives for reliability as well. In addition, with stakeholder support, the interconnection process and overall fairness has been augmented by the use of an independent engineer, which can act as a sort of “referee” between the utility and developer concerning interconnection requirements.

A key consideration is avoiding a circumstance in which the implementation of the Hawai‘i Electric Reliability Administrator (HERA) interferes with the PIMs. We believe that the Public Utilities Commission has the statutory authority and subject matter expertise to significantly improve the interconnection process without standing up HERA. HERA may also be costly to establish and may not be necessary considering the relatively small market Hawai‘i represents.

As both the interconnection incentive and the independent engineer are improvements that had significant stakeholder input—and have been in place for less than a year—we have a strong preference for allowing these innovations to be tested and prove themselves before adding additional requirements and legislation “on top of,” so-to-speak, this new approach.

Thank you for the opportunity to testify.

Respectfully,

Micah Munekata
Director of Government Affairs



Testimony to the Committee on Environmental Protection

Tuesday, March 14, 2023

9:30 AM

Conference Room 325 and VIA Video Conference Hawaii State Capitol

SB 839 SD2

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

Hawaii Clean Power Alliance (HCPA) **supports** SB 839 SD2, which establishes the Hawaii Electricity Reliability Surcharge Special Fund. Requires the Public Utilities Commission to establish reliability standards and interconnection requirements for all users, owners, or operators of the Hawaii electric system and determine the responsibility of costs associated with any reliability standards or inter-connection requirements. Requires the Public Utilities Commission to establish: (1) the distinction between interconnection facilities and utility network upgrades; (2) that the cost of interconnection facilities shall be the responsibility of the interconnection customer; and (3) that the cost of utility network upgrades shall be the sole responsibility of the transmission provider. Establishes a timeline and requirements for interconnection procedures to be established by the Public Utilities Commission for certain utility-scale renewable energy projects. Requires implementation of the Hawaii Electricity Reliability Administrator Law upon establishment of the Hawaii Electricity Reliability Administrator Surcharge. Beginning 1/1/2024, requires the surcharge to be imposed on certain customers to cover the costs of the Administrator to be deposited into the Hawaii Electricity Reliability Surcharge Special Fund Subaccount. Requires the Public Utilities Commission to submit a report and assessment of the Hawaii Electric Reliability Administrator to the Legislature. Appropriates funds.

Hawaii Clean Power Alliance is a nonprofit alliance organized to advance and sustain the development of clean energy in Hawaii. Our goal is to support the state's policy goal of 100 percent renewable energy by 2045. We advocate for utility-scale renewable energy, which is critical to meeting the state's clean energy and carbon reduction goals.

We offer these comments in **support** of SB 839 SD2.

The Issue

As the legislature recognizes, moving with intention and urgency is needed to meet the state's ambitious renewable energy goals, bring financial relief to ratepayers, and reduce carbon emissions. Viable renewable projects rely on a clear timeline and transparent and straightforward costs to ensure their proposed projects can provide affordable renewable energy to the ratepayers and will positively contribute to the state's renewable energy portfolio and carbon reduction goals.

Power supply and electric grid system reliability is essential to everyone in the state – utilities and consumers. The state's decision to mandate the retirement of the coal plant was based on the expectation of timely completion of new replacement renewable generation. Significant delays of these new renewable projects and termination of many of these projects were due, in part to interconnection delays and escalating interconnection costs and have created heightened concerns regarding the potential for outages and the increased use of fossil fuel at a higher price to ratepayers.

HERA will Save Ratepayers Electricity Costs

Out of the 8 projects in the RFP1 solicitation, only 2 projects have been completed, and of the 19 projects of RFP2 have resulted in close to 50% terminating. These have terminated or been delayed, in part by Covid, supply chain issues, rising costs and the cost of interconnection. The Hawaiian Electric and the PUC tracks the financial impacts to ratepayers of these delays of the renewable projects versus the increasing cost of fossil fuels. As of February 2023, the cumulative impacts of the cost difference of paying the current oil based energy vs what they could have been paying if the renewable projects were operating have **cost ratepayers over \$82 Million** for just the RFP 1 delays and that does not include the RFP 2 delays. (See Docket No. 2021-0024 *Opening a Proceeding to Review Hawaiian Electric's Interconnection Process and Transition Plans for Retirement of Fossil Fuel Power Plants* [PUC DMS LINK](#), at page 88/93).

By revising this existing statute – simply changing the word “may” to “shall” – the legislature provides the public utility commission full oversight and authority over the interconnection process and will take a meaningful and substantive step towards meeting the ambitious renewable energy targets.

How the Legislation will Accelerate Renewable Projects

Developers look to two markers to determine the viability of renewable projects:

- (1) timeliness and consistency of decision-making and execution by the regulatory and utility entities.
- (2) the costs of interconnection.

Recently, the public utilities commission has instituted that the utility interconnection study (IRS) (which provides the interconnection costs) be completed after the power purchase agreement (PPA) rate has been established and prior to submission for the PUC approval (previous process initiated the IRS after the PUC submission). However, once the PPA rate is established, there is no mechanism in the bidding process or contracting process to revise the rate to reflect escalating interconnection costs, which, for RFP1 and RFP2 have increased significantly. In fact, the utility is allowed to increase these costs up through the delivery of the project, usually at least 3 years after establishing the power purchase price. This new process, intended to mitigate the uncertainty of interconnection timeliness and costs, does little to fix the issue and continues to jeopardize the project's successful completion. The new process merely allows the project to terminate earlier in the process. When these costs become apparent long after the proposed price has been approved, without the ability to adjust the price due to factors beyond its control such as interconnection costs, it can make the project no longer financially viable and financeable. As we have seen this play out in recent months, this will cause the project to terminate, setting back renewable development for many years. Hawaii was once known as the innovative and a welcoming opportunity to develop renewable energy projects. It now leaves the industry wary of developing projects in Hawaii due to the risks involved in Hawaii. We note that the PUC has addressed the issue of timeliness of the interconnection process in Docket No 2018-0088, however transparency in cost has not been addressed and this bill can help to resolve some of these risks that delay the state's achievement of the clean energy goals.

Independent Engineer an Excellent Initial Step, However Falls Short of Hawaii Electric Reliability Administrator Responsibilities

Last year, the PUC completed a study on interconnection issues as directed by the 2022 Legislature. The study concluded that interconnection needs reform; however, it stopped short to recommend the Hawaii Electric Reliability Administrator (HERA) position, and instead recommended a short-term consultant be an Independent Engineer (IE), yet only the upcoming RFP 3 renewable energy procurement. The PUC procured a three-year IE consultant. While promising, this falls short of correcting the interconnection issues, because RFP 1 and 2 projects are not included, and the risks remain. Additionally, the IE will not have direct authority compared to a Hawaii Electric Reliability Administrator who will have institutional knowledge as a staff of the PUC. A qualified entity can dedicate focus to address the interconnection process, timeliness, transparency, and equity. If the PUC continues to rely on the Independent Engineer to be accountable for this process, we ask that at minimum, expand the IE role to include the eighteen (18) - plus RFP 1 and RFP 2 projects and Community Based Renewable projects that are not yet completed.

Funding

Additionally, as stated in statute, the cost of the Hawaii Electricity Reliability Administrator Program is funded by those projects that are interconnecting to the grid, not the ratepayer, into the HERA special fund as noted in Section 4 of the bill, §269-146. We note that SB839 SD2 has an amendment that has ratepayers fund the HERA, however, the original statute has the position funded by the interconnecting projects. Also, contrary to the concerns outlined in others' testimonies, this administrator is not a mirror of a large organization such as the California or New England ISO, with associated costs.

Public Utility Commission Regulatory Oversight

Put simply, when risks are controlled, so are costs. The HERA allows for the PUC to have more oversight into grid reliability standards and interconnection process and provides for more transparency. It puts in place tools that address and control costs, eliminating the unknowns that can derail a project. This measure will ultimately save ratepayers money by controlling costs on the front end of the process by providing more regulatory oversight, which prevents escalating costs due to increased risk. Importantly, as implemented most other states, it also ensures that the renewable project bears the risk and is responsible for all costs of interconnecting to the grid and the utility is responsible for any grid facilities costs and to be fair, to allow the utility to recover these costs in the existing rate-case process.

Summary

When variables and risks are controlled through PUC oversight, ultimately rate payers' benefit. This bill will support the state's progress to 100 percent renewable electricity while setting standards for grid reliability, a win-win-win for all stakeholders.

We ask the committees to pass SB 839 SD2.

Attachment: Docket No. 2021-0024 Opening a Proceeding to Review Hawaiian Electric's Interconnection Process and Transition Plans for Retirement of Fossil Fuel Power Plants page 88

PPA	Island	Developer	Project Size (MW/MWh)	Unit Price (\$/kWh)	Updated Unit Price (\$/kWh)	NEP (MWh)	GCOD in PPA filing	Updated GCOD in PPA Amendment ⁸	Actual Commercial Operations Date	YE 2021	YTD 2022	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	YE 2023	TOTAL		
Stage 1																											
AES Waikoloa Solar ^{2,9}	Hawaii	AES	30 MW / 120 MWh	0.07945508	0.08885258	81,406	7/20/2021	4/21/2023		(\$3,029,656.30)	(\$12,215,765.01)	(\$757,334.52)	(\$716,017.68)	\$0.00	\$0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	(\$1,473,352.20)	(\$16,718,773.51)	
AES Kiihelani	Maui	AES	60 MW / 240 MWh	0.077793515	0.077793515	163,939	7/20/2021	10/27/2023		(\$5,854,285.74)	(\$24,349,880.80)	(\$2,243,876.23)	(\$1,894,425.90)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	NA	NA	NA	(\$4,138,302.13)	(\$34,342,468.67)	
AES West Oahu ³	Oahu	AES	12.5 MW / 50 MWh	0.105618548	0.115318548	27,571	9/30/2021	1/20/2023		\$35,777.83	(\$1,536,924.61)	(\$246,974.70)	(\$135,984.74)	\$0.00	\$0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	(\$382,959.44)	(\$1,884,106.22)	
Hoohana ⁶	Oahu	174Power Global	52 MW / 208 MWh	0.09885800264	0.09885800264	114,481	12/31/2021	8/31/2023		\$0.00	(\$7,791,466.79)	(\$1,344,133.00)	(\$1,112,885.77)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	NA	NA	NA	NA	NA	(\$2,457,018.77)	(\$10,248,485.56)	
Mililani I Solar ^{1,4}	Oahu	Clearway (NRG)	39 MW / 156 MWh	0.090962931	0.090962931	96,000	12/31/2021	7/31/2022	7/31/2022	\$0.00	(\$1,771,408.19)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	\$0.00	(\$1,771,408.19)	
Waiawa Solar ^{5,8}	Oahu	Clearway (NRG)	36 MW / 144 MWh	0.101105716	0.099810719	87,927	12/31/2021	9/30/2022	1/11/2023	\$0.00	(\$5,476,575.08)	(\$230,724.24)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	(\$230,724.24)	(\$5,707,299.32)	
Paeehu Solar	Maui	Innergex	15 MW / 60 MWh	0.116845322	0.116845322	41,234	6/30/2022	9/8/2023		\$0.00	(\$2,775,469.67)	(\$427,618.61)	(\$352,959.76)	\$0.00	\$0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	(\$780,578.37)	(\$3,556,048.04)	
Hale Kuawehi	Hawaii	Innergex	30 MW / 120 MWh	0.087399188	0.087399188	87,415	6/30/2022	6/1/2023		\$0.00	(\$6,587,436.18)	(\$824,027.72)	(\$778,616.84)	\$0.00	\$0.00	\$0.00	\$0.00	NA	NA	NA	NA	NA	NA	NA	(\$1,602,644.56)	(\$8,190,080.74)	
TOTAL										(\$8,848,164.21)	(\$62,504,926.33)	(\$6,074,689.02)	(\$4,990,890.69)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	(\$11,065,579.71)	(\$82,418,670.25)

Note:

- Mililani I Solar achieved COD on 7/31/2022. The PV + BESS system is available for dispatchability.
- AES Waikoloa price was updated to \$0.08885258 per the 2nd PPA amendment, dated 5/25/2022; effective date of change is 7/30/2022.
- AES West Oahu price was updated to \$0.115318548 per the 2nd PPA amendment, dated 3/21/2022; effective date of change is 6/6/2022. Liquidated damages of \$3,472.22/day for not meeting the GCOD of 1/20/2023.
- Updated GCOD for Mililani I from 7/29/2022 to 7/31/2022.
- Updated GCOD for Waiawa Solar from 11/14/2022 to 9/30/2022.
- Updated GCOD for Ho'ohana Solar from 12/15/2023 to 8/31/2023.
- Changed Column Heading from Updated GCOD in IRS Amendment to Updated GCOD in PPA Amendment.
- Waiawa price was updated to the third tier pricing of \$0.099810719 per the First Amended to Amended and Restated Power Purchase Agreement, dated 7/30/2021; effective date of change is 11/30/2022, which includes a 60 day extension due to force majeure. Waiawa achieved COD on 1/11/2023. The PV+BESS system is available for dispatchability. The total variance impact is net of any liquidated damages assessed by the Seller due to daily delay damages.
- Updated GCOD for AES Waikoloa from 12/16/2022 to 4/21/2023.
- Kapolei Energy Storage (KES) GCOD was June 1, 2022. KES is a BESS facility that doesn't have an energy payment and therefore this formula would not be applicable. Updated GCOD for KES was 3/10/2023 to 12/30/2022
- Kamaole Solar price was updated to \$0.13552/kWh and the Updated GCOD to 12/31/2024

Month	On-Peak Avoided Cost \$/kWh		
	Oahu	Hawaii	Maui
May-21	0.08241	0.14146	0.13163
Jun-21	0.08612	0.13949	0.13583
Jul-21	0.09054	0.14201	0.14278
Aug-21	0.09240	0.15579	0.14941
Sep-21	0.09157	0.16050	0.15413
Oct-21	0.09503	0.15919	0.15099
Nov-21	0.10200	0.16630	0.15782
Dec-21	0.10443	0.17691	0.17906
Jan-22	0.09105	0.18370	0.16753
Feb-22	0.10485	0.19002	0.16067
Mar-22	0.10953	0.20512	0.17632
Apr-22	0.12497	0.25385	0.20511
May-22	0.13532	0.24436	0.23705
Jun-22	0.13828	0.30259	0.26268
Jul-22	0.15397	0.28563	0.25971
Aug-22	0.14140	0.25701	0.28998
Sep-22	0.26303	0.22870	0.24987
Oct-22	0.25331	0.21993	0.24369
Nov-22	0.24344	0.21000	0.22173
Dec-22	0.24114	0.21892	0.23629
Jan-23	0.23710	0.19839	0.23895
Feb-23	0.22558	0.20351	0.22843
Mar-23			
Apr-23			
May-23			
Jun-23			
Jul-23			
Aug-23			
Sep-23			
Oct-23			
Nov-23			
Dec-23			



Hawaii Solar Energy Association
Serving Hawaii Since 1977

Testimony of The Hawaii Solar Energy Association (HSEA) Regarding SB839 SD2, Relating to Renewable Energy, Before the House Committee on Energy and Environmental Protection

Tuesday, March 14, 2023

Aloha Chair Lowen, Vice Chair Cochran, and committee members:

The Hawaii Solar Energy Association (HSEA) **offers comments on SB839 SD2**, which requires the Public Utilities Commission to establish reliability standards and interconnection requirements for all users, owners, or operators of the Hawaii electric system and determine the responsibility of costs associated with any reliability standards or inter-connection requirements, among other provisions.

HSEA members include the majority of locally owned and operated renewable energy companies doing business in the state along with leading global cleantech manufacturers and service providers that invest and sell in our market. We employ thousands of residents in diverse green economy jobs that are innovating, designing, and building Hawaii's pathway to a renewable energy future. HSEA advocates for policies that help Hawaii achieve critical climate and resilience goals by enabling residents and businesses to invest in and benefit from the transition to clean energy. These investments provide reliable and affordable power that reduces energy cost burden for all ratepayers and contributes to Hawaii's energy security as we decarbonize our economy and electric grid.

HSEA appreciates the intent of this measure to facilitate the interconnection of renewable energy projects and clarify responsibility for costs associated with grid upgrades; however, given existing regulatory mechanisms, including the Performance-Based Regulation (PBR), we believe that additional legislative measures are not necessary at this juncture to aid the PUC and stakeholders in grid transition efforts. Adding an extra layer of stringency and rules may have unintended consequences and increase cost, complexity, and uncertainty.

If this measure moves forward, we recommend adding language to clarify the responsibility for costs associated with ***distribution system upgrades*** for interconnecting on-site distributed energy resources and other non-wires alternatives.

Thank you for providing the opportunity to **offer comments on SB839 SD2**.



Hawaii Solar Energy Association
Serving Hawaii Since 1977

Respectfully,

/s/ Rocky Mould

Rocky Mould
Executive Director



**Hawaiian
Electric**

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

S.B. 839 S.D.2

Relating to Renewable Energy

Tuesday, March 14, 2023

9:30 a.m., Agenda Item #7

State Capitol, Conference Room 325 & Video Conference

Greg Shimokawa
Director, Renewable Acquisition
Hawaiian Electric

Chair Lowen, Vice Chair Cochran, and Members of the Committee,

My name is Greg Shimokawa and I am testifying on behalf of Hawaiian Electric in **opposition** to S.B. 839 S.D.2, Relating to Renewable Energy.

S.B. 839 S.D.2 proposes to increase Public Utilities Commission (“PUC”) regulation of reliability standards, and interconnection requirements, processes, and cost responsibilities for utility-scale renewable energy projects. A similar bill was introduced in the 2022 session. That bill ultimately resulted in Act 201, which mandated a study by an independent consultant of the interconnection process. The first phase of such study was concluded at the end of 2022 and a second phase is planned. The first phase suggested only minor improvements to the process, which are currently being implemented by Hawaiian Electric. Enacting any legislation prior to the implementation of these items and the second phase of the Act 201 study is premature.

Hawaiian Electric understands the economic and environmental importance of streamlining the interconnection process to accelerate further integration of renewable energy projects. Timely completion and successful development of renewable projects

are critically important for several reasons, including meeting the State's Renewable Portfolio Standards ("RPS") requirements, reducing reliance on imported fossil fuels, stabilizing and reducing volatility of our customers' bills, reducing greenhouse gas emissions, and assisting with post-pandemic economic recovery. Given the importance of interconnection, the PUC, Hawaiian Electric, and other stakeholders have taken the following actions since the last legislative session. These changes should be allowed to take effect prior to introducing any legislation requiring further changes to the process.

1. The Performance Based Regulation ("PBR") process has implemented two scorecards related to interconnection, providing further insight into the process and timelines. Most importantly, in the PBR docket, a performance incentive mechanism has been set and approved for utility scale interconnection. This performance incentive mechanism penalizes the utility when an interconnection requirement study ("IRS") takes longer than 12 months and rewards the utility the sooner it is completed. Further, in PBR the PUC has implemented rewards for accelerated RPS achievement and pursuant to Hawaii Revised Statute §269-92 established a \$20/MWh penalty for non-compliance with the RPS mandates. Additional penalties as proposed in S.B. 839 would be unduly punitive.
2. As noted above, Phase 1 of the Act 201 study was completed and filed at the end of 2022. Phase 2 of the study will specifically address driving factors for interconnection costs and timelines, and it would be premature to institute the provisions in this bill before such study is complete.
3. Hawaiian Electric continues to improve efficiencies and reduce timelines for the interconnection process based on its experiences with Stage 1 and 2 procurements. The company has incorporated changes in its Stage 3 RFPs,

including the following measures: (1) accelerated and streamlined engineering aspects, (2) shortened the IRS process by allowing for more parallel efforts and an earlier equipment software model verification process, and (3) provided developers with preliminary interconnection requirements and circuit capacity information during the bid submittal period, so developers can prepare more accurate bids. In addition, Hawaiian Electric has proposed a process where PPAs are executed after IRS completion, which will help ensure project milestones match the results of the IRS, and incentivizes a quicker IRS process. This process would also enable Hawaiian Electric to create efficiencies by submitting only one application for approval of both a PPA and any line extension request.

4. The PUC hired an Independent Engineer (“IE”) to oversee technical aspects of the Stage 3 RFP process. Among other things, the IE has been tasked with comparing estimates to actual costs and verifying cost allocations by providing an independent review of interconnection requirements and their cost implications, and participating in discussions related to interconnection between the Company and developers.
5. As proposed, requiring the establishment of the Hawaii electricity reliability administrator (HERA) as a mandatory section in S.B. 839 S.D.2 is not the most cost-effective way to achieve the goals stated in this bill, as the required Hawaii electricity reliability administrator surcharge for HERA would result in additional costs to Hawaiian Electric customers.

For these reasons, Hawaiian Electric believes S.B. 839 S.D.2 is unnecessary.

Hawaiian Electric also notes that:

1. The PUC already has the authority to determine whether the requirements for

interconnection are reasonable and has mechanisms in place to regulate interconnection requirements.

2. S.B. 839 S.D.2 does not take into consideration that developers play a crucial role in the interconnection process.
3. Mandating interconnection standards and timelines reduces the flexibility needed to improve the efficiency and viability of renewable energy projects if changes would result in a better project. For example, changing equipment or design specifications for reduced costs and greater functionality, or to address permitting requirements, financing restrictions, or community feedback. Imposing strict requirements will likely slow the interconnection process and/or result in less reliable and resilient grids.
4. The PUC already delineates interconnection cost responsibilities, as Hawaiian Electric already includes Rule 19, a PUC approved tariff, in its RFPs. Rule 19 specifies the responsibility of interconnection costs, and outlines definitions associated with the interconnection process.

Hawaiian Electric firmly supports timely project completion. To this end, the PUC, Hawaiian Electric, and other stakeholders, have taken significant action since the 2022 legislative session to further improve the interconnection process, rendering S.B. 839 S.D.2 unnecessary.

Thank you for this opportunity to comment in opposition to S.B. 839 S.D.2. For reasons mentioned above, we request this bill be held.



**HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION
State Capitol, Room 325
415 South Beretania Street
9:30 AM**

MARCH 14, 2023

RE: SB 839 - RELATING TO RENEWABLE ENERGY

Chair Lowen, Vice Chair Cochran, and members of the committee:

My name is Max Lindsey, 2023 Government Relations Committee Chair 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 in opposition to SB 839. This bill would require the Public Utilities Commission (PUC) to establish reliability standards and interconnection requirements for certain renewable energy projects; provided that any costs for changes in reliability standards or interconnection requirements shall not be the responsibility of the interconnection customer after the interconnection customer's power purchase agreement has been approved by the PUC..

While we support renewable energy, this bill would further raise the cost of housing. With respect to energy interconnectivity, Hawaiian Electric Company already has a process during planning for housing developments. Housing developers already work closely with all utilities in the planning process, taking into account infrastructure, energy efficiency, and cost.

The state of Hawaii is in a dire housing crisis. As the Legislature is aware, the cost of housing in Hawaii is extremely high, with Oahu's median price of homes being currently over \$1 million. Approximately 153,967 U.S. households are priced out of buying a home for every \$1000 increase in price, according to the National Association of Home Builders (NAHB). We are in support of legislation that would allow for the building of much-needed housing at every price point in Hawaii.

Thank you for the opportunity to share our concerns.

SB-839-SD-2

Submitted on: 3/11/2023 11:07:34 AM

Testimony for EEP on 3/14/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Regina Gregory	Individual	Oppose	Written Testimony Only

Comments:

I am concerned that this will add yet another line to my already burdensome electric bill.