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Testimony of the Department of Commerce and Consumer Affairs

Before the
Senate Committee on Commerce and Consumer Protection
And
Senate Committee on Ways and Means
Wednesday, March 1, 2023
9:30 a.m.
Conference Room 211

On the following measure:
S.B. 839, S.D. 1, RELATING TO RENEWABLE ENERGY

WRITTEN TESTIMONY ONLY

Chair Keohokalole, Chair Dela Cruz, and Members of the Committees:

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. 1 version 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 most likely be ultimately 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
SENATE COMMITTEES ON

COMMERCE AND CONSUMER PROTECTION

AND

WAYS AND MEANS

March 1, 2023

9:30 AM

Chair Keohokalole, Chair Dela Cruz, Vice Chair Fukunaga, Vice Chair Keith-Agaran,
and Members of the Committees:

MEASURE: S.B. No. 839, SD 1

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. (SD1)

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 Committee on Energy, Economic Development, and Tourism. 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.

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 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. Specifically, Hawaiian Electric’s Rule No. 19 includes definitions for “interconnection facilities” and “system upgrades” and the cost responsibilities for each. In brief, the independent power producers (“IPPs”) are responsible for the interconnection facilities between the generating facility and the point of interconnection and between the point of interconnection and the grid connection point, unless such a facility is deemed to only benefit the utility and is not attributable to the generating facility. The utility is responsible for system upgrades which are improvements to the grid other than interconnection facilities that are required to provide safe and reliability service.

Furthermore, the Commission disagrees with the legislature’s finding that this lack of regulation “results in the ratepayer bearing the full financial burden of both interconnection

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>.

costs and utility network upgrades in the electricity rates.” The Commission points out that throughout the U.S., regardless of FERC jurisdiction, ratepayers will bear the full financial burden of interconnection costs and utility network upgrades in the electricity rates, since the utility’s capital expenses are passed through to customers in addition to the cost of generation from independent power producers, which include the cost of interconnection facilities.

The Commission will continue to oversee how this rule is applied to interconnection customers 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. Therefore, the Commission will continue its efforts to determine who should bear the cost burden of interconnection-related expenses in a manner that fairly allocates such costs. The Commission will continue to utilize the Independent Engineer to make sure that interconnection requirements and information are clearly provided in Hawaiian Electric’s tariffs and RFP materials to ensure certainty and cost transparency for project developers.

Relating to Section 2, the Act 201 study recommends that the Commission revisit the efforts to establish reliability standards for the interconnection procedures of the electric utility. 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.

Relating to Section 3, the Act 201 study finds that the Commission is responsible for approving the interconnection procedures utilized by the electric utility and continues to iterate on these procedures to make the process more efficient and transparent. To these ends, the Commission recently approved a performance incentive that will ensure the interconnection requirements are met as soon as practicable and the Commission has already required the Companies to file monthly status updates after a power purchase agreement is filed. Therefore, the Commission is already going above and beyond the requirements laid out in the proposed additions to HRS 269-145 Section b(1).

Relating to Section 5, 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.



**Hawaiian
Electric**

**TESTIMONY BEFORE THE SENATE COMMITTEE
ON COMMERCE AND CONSUMER PROTECTION
AND THE SENATE COMMITTEE ON WAYS AND
MEANS**

S.B. 839 S.D.1

Relating to Renewable Energy

Wednesday, March 1, 2023

9:30 a.m., Agenda Item #8

State Capitol, Conference Room 211 & Video Conference

Greg Shimokawa
Director, Renewable Acquisition
Hawaiian Electric

Chairs Keohokalole and Dela Cruz, Vice Chairs Fukunaga and Keith-Agaran, and Members of the Committees,

My name is Greg Shimokawa and I am testifying on behalf of Hawaiian Electric in **opposition** to S.B. 839 S.D.1, Relating to Renewable Energy.

S.B. 839 S.D.1 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 incentivize 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.1 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.1 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.1 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. Examples include, 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 the need for S.B. 839 S.D.1 unnecessary.

Thank you for this opportunity to comment in opposition to S.B. 839 S.D.1. For reasons mentioned above, we request this bill be held.



**Testimony to the Committee on Commerce and Consumer Protection and
Committee on Ways and Means**

Wednesday, March 1, 2023

9:30 AM

Conference Room 211 and VIA Video Conference Hawaii State Capitol

SB 839 SD1

Chair Keohokalole, Chair Dela Cruz, Vice Chair Fukunaga, Vice Chair Keith-Agaran and members of the committees,

Hawaii Clean Power Alliance (HCPA) **supports** SB 839 SD1, 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 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.

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 SD1.

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 3 projects have been completed, and of the 19 projects of RFP2 have resulted in close to 50% terminating. 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 rate payers 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. Timeliness of the interconnection process and transparency in cost 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 short-term 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.

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.

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. 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 SD1.

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			



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SENATE COMMITTEES ON COMMERCE & CONSUMER PROTECTION AND WAYS & MEANS
Wednesday, March 1, 2023 — 9:30 a.m.

Ulupono Initiative offers comments on SB 839 SD1, Relating to Renewable Energy.

Dear Chair Keohokalole, Chair Dela Cruz, and Members of the Committees:

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 SD1, 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