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Testimony of
MARK B. GLICK, Chief Energy Officer

before the
SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT

Wednesday, February 7, 2024
1:00 PM
State Capitol, Conference Room 224 and Videoconference

Providing Comments on
SB 3079

RELATING TO RENEWABLE ENERGY.

Chair Gabbard and Vice Chair Richards, and Members of the Committee, the Hawai'i State Energy Office (HSEO) appreciates the opportunity to provide comments on SB 3079, which amends Hawai'i Revised Statutes §269-6 to clarify that the Public Utilities Commission (PUC) shall consider the effect of the State's reliance on fossil fuels on generation-based greenhouse gas emissions and may require a greenhouse gas emissions analysis for energy projects that do not result in generation-based greenhouse gas emissions.

HSEO's comments are guided by its mission to promote energy efficiency, renewable energy, and clean transportation to help achieve a resilient, clean energy, decarbonized economy, and comments on this bill are guided by findings and recommendations of the Hawai'i Pathways to Decarbonization Report to the 2024 Hawai'i State Legislature submitted by Act 238 Sessions Laws of Hawai'i, 2022.

While HSEO supports the intent of SB 3079 and agrees HSEO is concerned that the language amending HRS §269-6 currently proposed in this bill is ambiguous and may preclude appropriate lifecycle assessment, by only calling out "generation-based greenhouse gas emissions", which is not defined and could be open to interpretation. If the "generation-based emissions" are interpreted as "stack emissions" or emissions that

occur during the combustion or generation process, upstream emissions would not be appropriately considered.

Lifecycle greenhouse gas analysis, also known as lifecycle assessment, quantifies or evaluates the environmental and climate warming impact of specific products or activities throughout their entire lifecycle – including extraction, distribution, use, and disposal.¹ Lifecycle assessment provides a framework for the PUC to consider the environmental and greenhouse gas implications of projects seeking PUC approval, facilitating informed decision-making and the PUC's requirement to protect the public interest.²

The bill's language is also inconsistent with findings and recommendations from the recent HSEO Act 238 Report, Chapter 5.³ The importance of considering lifecycle emissions is going to become more critical as more biofuel-powered projects and biofuel contracts come before the Commission. This is because the lifecycle carbon intensity for different biofuels is wide-ranging and is highly dependent on feedstock characteristics, fertilizer application, growth characteristics, and processing methods. Thus, the lifecycle GHG emissions from bioenergy may not always exhibit emissions lower than that of fossil fuel.⁴

Currently, the PUC is required to “consider the need to reduce the State’s reliance on fossil fuels through energy efficiency and increased renewable energy generation in exercising its duties” and is required to “explicitly consider” greenhouse gas emissions when making determinations on the reasonableness of the costs pertaining to the electric or gas utility system (HRS §269-96). Omitting lifecycle GHG emissions would not be consistent with the intent of this bill, and the PUC's requirement to protect public interest.

Therefore, HSEO recommends the suggested language be modified to ensure project- and fuel-specific lifecycle assessment is included within the PUC's approval

¹ Hawai'i State Energy Office (2023). Hawai'i Pathways to Decarbonization, Act 238 Report to the 2024 Hawai'i State Legislature (Act 238 Report). (Page 218)

² Supreme Court of the State of Hawai'i. (March 13, 2023) Appeal from the Public Utilities Commission (Docket 2017-0122). Opinion of the Court by Eddin's.

³ Act 238 Report (Pages 214-233)

⁴ Id (Pages 219-224)

process. Further HSEO recommends lifecycle greenhouse gas emissions be defined in HRS §269-1.

Accordingly, HSEO recommends the following changes to amend HRS §269-6 – General powers and duties:

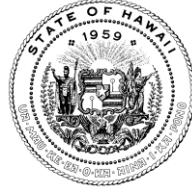
(b) The public utilities commission shall consider the need to reduce the State's reliance on fossil fuels through energy efficiency and increased renewable energy generation in exercising its authority and duties under this chapter. In making determinations of the reasonableness of the costs pertaining to electric or gas utility system capital improvements and operations, the commission shall explicitly consider, quantitatively or qualitatively, the effect of the State's reliance on fossil fuels on:

- (1) Price volatility;
- (2) Export of funds for fuel imports;
- (3) Fuel supply reliability risk; and
- (4) Lifecycle greenhouse gas emissions for projects involving fuel combustion; provided that the public utilities commission may require a lifecycle greenhouse gas emissions assessment for energy projects that do not involve the combustion of fuel.

HSEO also recommends the bill include the definition of lifecycle emissions in HRS §269-1.

"Lifecycle greenhouse gas emissions assessment" - means the method used to estimate the environmental impact of a product or fuel based on a set of established system boundaries for the product, project, or fuel's value chain - which shall include extraction and processing of raw materials, manufacturing and processing of materials, transportation and distribution, lifetime use, recycling, and the final disposal.

Thank you for the opportunity to testify.



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Testimony of the Department of Commerce and Consumer Affairs

**Before the
Senate Committee on Agriculture and Environment
Wednesday, February 7, 2024
1:00 p.m.
Conference Room 224**

**On the following measure:
S.B. 3079, RELATING TO RENEWABLE ENERGY**

Chair Gabbard 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 supports this administration bill.

The purpose of this bill is to amend Hawaii Revised Statutes (HRS) § 269-6 to clarify that the Public Utilities Commission (Commission) shall consider the effect of the State's reliance on fossil fuels on generation-based greenhouse gas (GHG) emissions and may require a GHG emission analysis for energy projects that do not result in generation-based GHG emissions.

Currently, under HRS § 269-6(b) the Commission, in making a determination of the reasonableness of the costs regarding energy projects of electric and gas systems, is required to consider the State's reliance on fossil fuels on, among other matters, GHG emissions. In 2021, the Legislature clarified that this analysis, including for GHG emissions, is not required for a utility's routine system replacements, such as for

overhauls and overhead or underground line determinations, or determinations that do not pertain to capital improvements or operations, including but not limited to financing requests (see HRS § 269-6(c)).

This bill revises the current provisions of HRS § 269-6(b) to clarify that the Commission is required to consider the effect of the State's reliance on fossil fuels on generation-based GHG emissions, and provides that the Commission may require GHG emission analysis for energy projects that do not result in generation-based GHG emission. The Department understands that this bill will make it unnecessary to conduct GHG analysis for energy projects that do not result in generation-based GHG emissions and provides the Commission with flexibility regarding requiring GHG analysis of energy projects. Conducting GHG analysis is often viewed as time-consuming and costly, and the costs for GHG analysis can be passed on to ratepayers. To ensure clarity and consistency in the application of this provision, the Department offers that defining which types of energy projects are deemed to not result in generation-based GHG emissions would be helpful.

Thank you for the opportunity to testify on this administration bill.

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

TO THE
SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT

Wednesday, February 7, 2024
1:00 p.m.

Chair Gabbard, Vice Chair, and Members of the Committee:

MEASURE: S.B.3079

TITLE: RELATING TO RENEWABLE ENERGY.

DESCRIPTION: Amends section 269-6, Hawaii Revised Statutes, to clarify that the Public Utilities Commission shall consider the effect of the State's reliance on fossil fuels on generation-based greenhouse gas emissions and may require a greenhouse gas emissions analysis for energy projects that do not result in generation-based greenhouse gas emissions.

POSITION:

The Public Utilities Commission ("Commission") supports this measure and offers the following comments for consideration.

COMMENTS:

The Commission supports this Administration Bill to clarify that the Commission may determine that analysis of greenhouse gas emissions is not necessary under certain circumstances when generation-based emissions for a project are zero and provides the Commission discretion to determine that a quantitative greenhouse gas emissions analysis is not required in certain circumstances, such as when a project does not burn emitting fuels. The Commission believes that this bill would reduce costs to ratepayers and would support more timely review of projects.

The Commission observes that section 269-6 (b), Hawaii Revised Statutes, currently requires that the Commission "explicitly consider, quantitatively or qualitatively, the effect of the State's reliance on fossil fuels on . . . greenhouse gas emissions." The Commission has worked diligently to examine lifecycle greenhouse gas ("GHG") emissions in its review of power purchase agreements, utility-owned renewable energy projects, and fuel

contracts. Considering lifecycle emissions is going to become more critical as more power purchase agreements for new firm generation and new biofuel contracts come before the Commission. This is because the lifecycle carbon intensity (gCO_{2e}/MJ) for different biofuels is wide-ranging and is highly dependent on how feedstock is grown, fertilized, harvested, processed, transported, stored, and combusted.¹

The Commission observes that unlike the wide range of lifecycle GHG emissions intensities associated with fuel combustion, other renewable technologies have demonstrated a narrower, more predictable range of lifecycle GHG emissions intensities.

To better clarify the intent of this measure, the Commission recommends the following amendments to S.B. 3079:

Page 3 – Line 1 to Line 14

In making determinations of the reasonableness of the costs pertaining to electric or gas utility system capital improvements and operations, the public utilities commission shall explicitly consider, quantitatively or qualitatively, the effect of the State's reliance on fossil fuels on:

- (1) Price volatility;
- (2) Export of funds for fuel imports;
- (3) Fuel supply reliability risk; and
- (4) ~~{Greenhouse}~~ Generation-based Lifecycle greenhouse gas emissions[-] for projects involving the combustion of fuel; provided that the public utilities commission may require a greenhouse gas emissions analysis for energy projects that do not involve the combustion of fuel result in generation-based greenhouse gas emissions.

The Commission also recommends the bill include the definition of lifecycle emissions by adding to HRS §269-1:

¹ See U.S. EPA. "Framework for Assessing Biogenic CO₂ Emissions from Stationary Sources, November 2014 ("EPA Biogenic Emissions Framework"), available at: [snapshot.epa.gov](https://www.epa.gov/snapshots/epa-biogenic-emissions-framework).

See also U.S. EPA Office of the Administrator Science Advisory Board (SAB). "SAB Review of EPA's Accounting Framework for Biogenic CO₂ Emissions from Stationary Sources (2014)," March 2019. available at: [sab.epa.gov](https://www.epa.gov/sab/sab-review-of-epas-accounting-framework-for-biogenic-co2-emissions-from-stationary-sources).

See also National Renewable Energy Laboratory (NREL), "Life Cycle Greenhouse Gas Emissions from Electricity Generation: Update," September 2021, available at: <https://www.nrel.gov/docs/fy21osti/80580.pdf>.

"Lifecycle greenhouse gas emissions assessment" - means the method used to estimate the greenhouse gas impact of a product or fuel based on a set of established system boundaries for the product, project, or fuel's value chain - which shall include extraction and processing of raw materials, manufacturing and processing of materials, transportation and distribution, lifetime use, recycling, and the final disposal.

Thank you for the opportunity to testify on this measure.



**Hawaiian
Electric**

**TESTIMONY BEFORE THE SENATE COMMITTEE ON
AGRICULTURE AND ENVIRONMENT**

SB 3079

Relating to Renewable Energy

Wednesday, February 7, 2024

1:00 PM

State Capitol, Conference Room 224

James Abraham
Associate General Counsel
Hawaiian Electric

Dear Chair Gabbard, Vice Chair Richards, and Members of the Committee,

My name is James Abraham and I am testifying on behalf of Hawaiian Electric **in support** of SB 3079, Relating to Renewable Energy.

Hawaiian Electric supports SB 3079 because it will provide clarity to the types of proceedings before the Public Utilities Commission (“PUC”) that require additional procedural steps, such as extensive greenhouse gas (“GHG”) analyses. Generation related projects typically require the most attention and questioning regarding GHG emissions. This bill ensures that generation-based projects will continue to receive the appropriate scrutiny in the spirit of this law’s intent, while affording the PUC discretion to decide when its decisions for non-generation-based projects would be aided by GHG analyses. We support this bill because it will reduce administrative inefficiency and save costs not only for Hawaiian Electric and its customers, but also the PUC and the Consumer Advocate.

Accordingly, Hawaiian Electric supports SB 3079. Thank you for this opportunity to testify.



**Testimony to the Committees on Agriculture and Environment
February 7, 2024, 1:00 PM
VIA Video Conference & Conference Room 224, Hawaii State Capitol**

SB 3079

Chair Gabbard, Vice Chair Richards and members of the committee,

Hawaii Clean Power Alliance (HCPA) **supports** SB3079, which amends section §269-6, Hawaii Revised Statutes, to clarify that the Public Utilities Commission shall consider the effect of the State's reliance on fossil fuels on generation-based greenhouse gas emissions and may require a greenhouse gas emissions analysis for energy projects that do not result in generation-based greenhouse gas emissions.

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.

Hawaii faces many challenges in the utility sector, from the nation's highest electricity costs to its reliance on fossil fuels and as such has been wisely focused on pursuing clean energy to replace fossil fuels. The measurement of greenhouse gas (GHG) is a trusted barometer of efficiency and value of fuel sources. Currently, §269-6, which was enacted to review all renewable energy projects and evaluate them against fossil fuel generation requires the PUC to evaluate and require a GHG emissions analysis for all new renewable energy projects, however, certain types of technologies are already known to emit less than the GHG of fossil fuel generators.

A thorough GHG emissions analysis is always an in depth and expensive endeavor to undertake, ultimately resulting in those costs being borne by ratepayers. In the case of certain renewable energy technologies that additional expense is not necessary as proposed in this bill, which provides for the PUC to be empowered to evaluate costs and impacts of renewable energy projects and impose a GHG analysis if it considers it necessary. In the case of some clean energy technologies, such as solar and wind, it is already proven that there is a net benefit to GHG emissions compared to fossil-fueled generation due to their nongeneration-based technologies, thus making an additional expensive study unnecessary.

Hawaii already bears the most expensive electricity costs in the nation. While renewable energy projects offer great opportunity to reduce that cost, burdensome and duplicative studies erode that savings.

We ask the committee to pass this bill.