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OFFICE OF THE DIRECTOR
DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS

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Testimony of the Department of Commerce and Consumer Affairs

**Before the
Senate Committee on Agriculture and Environment
Monday, March 11, 2024
1:00 p.m.
Conference Room 224**

**On the following measure:
H.B. 2390, H.D. 2, 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 require the Public Utilities Commission (Commission) to explicitly consider the effect of the State's reliance on fossil fuels on lifecycle greenhouse gas (GHG) emissions and gives the Commission the discretion to require a lifecycle greenhouse gas emissions assessment for energy projects that do not involve the combustion of fuel.

Hawaii Revised Statutes (HRS) § 269-6(b) requires the Commission to consider the State's reliance on fossil fuels on, among other factors, GHG emissions when determining the reasonableness of the costs of capital improvements and operations. In 2021, in clarifying the scope of this analysis through Act 82, the Legislature gave the Commission discretion regarding the required analysis for projects proposed by water,

wastewater, and telecommunications utilities, but chose to maintain the mandatory requirement (“shall”) for proposed “costs pertaining to electric **and gas utility system[s]**” (see HRS § 269-6(b), emphasis added).

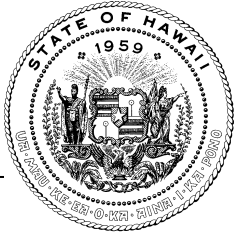
The Department understands that the intent of the bill is to enable a new discretionary category for non-combusting electrical energy generation projects, such as wind and solar, because their net lifecycle GHG emissions are often minimal. As such, enabling the Commission to exercise discretion on whether GHG emissions analysis is required on those types of projects could potentially decrease project costs. The Department also appreciates the bill’s specification that GHG emissions analyses use a lifecycle analytical framework because it provides the most accurate representation of a project’s impact on GHG emissions over its lifetime.

The Department assumes that the bill’s intent is to continue to maintain the mandatory requirement that gas utility projects must undergo GHG analysis. However, the Department notes that the bill’s current language may have the unintended consequence of making GHG emissions analysis discretionary for gas utility projects. As an example, a gas utility could potentially make a case that it should be exempt from performing a GHG analysis because its customers would be the entities combusting the fuel. The Department thus proposes the following language to HRS § 269-6(b)(4) to specify that the Commission is provided with discretion to perform GHG analyses only for energy generation projects that do not involve the combustion of fuel: “Lifecycle greenhouse gas emissions ~~for projects involving the combustion of fuel~~; provided that the public utilities commission may require a lifecycle greenhouse gas emissions assessment for energy generation projects that do not involve the combustion of fuel.”

The Department also offers that if the Legislature also intends to provide the Commission with discretion as to whether to perform GHG analyses on electrical transmission projects, the proposed amendment to HRS § 269-6(b)(4) offered above should also include language exempting electrical transmission projects: “Lifecycle greenhouse gas emissions ~~for projects involving the combustion of fuel~~; provided that the public utilities commission may require a

lifecycle greenhouse gas emissions assessment for energy generation projects that do not involve the combustion of fuel or electrical transmission projects.”

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



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Testimony of
MARK B. GLICK, Chief Energy Officer

before the
SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT

Monday, March 11, 2024
1:00 p.m.
State Capitol, Conference Room 224 and Videoconference

In Support of
HB 2390, HD2

RELATING TO RENEWABLE ENERGY.

Chair Gabbard, Vice Chair Richards, and members of the Committee, the Hawai'i State Energy Office (HSEO) supports HB 2390, HD2, which amends Hawai'i Revised Statutes (HRS) §269-6 to clarify that the Public Utilities Commission (PUC) shall explicitly consider the effect of the State's reliance on fossil fuels on lifecycle greenhouse gas emissions and gives the PUC the discretion to require a lifecycle greenhouse gas emissions assessment for energy projects that do not involve the combustion of fuel.

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 pursuant to HRS §196-71 and HRS §196-72 and by findings and recommendations of the HSEO report, *Hawai'i Pathways to Decarbonization*, Act 238 Sessions Laws of Hawai'i - 2022.

HSEO supports the revised language of HB 2390, HD2; the clarifications and new language in HB 2390, HD2, amending HRS §269-6 removes the ambiguity currently in statute and ensures lifecycle analysis is appropriately considered for energy projects that involve the combustion of fuel. Furthermore, HSEO believes this bill would support more timely reviews of projects and may lead to reduced costs to ratepayers.

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 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 current revised language is consistent 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 Further, giving the PUC flexibility to require GHG analysis for non-combustion projects can lower the administrative burden for certain technologies, which do not have such wide-ranging lifecycle emissions.

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). New language in the bill ensures that lifecycle emissions are appropriately considered.

Thank you for the opportunity to testify.

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)

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

TO THE
SENATE COMMITTEE ON
AGRICULTURE AND ENVIRONMENT

Monday, March 11, 2024
1:00 p.m.

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

MEASURE: HB 2390, HD 2

TITLE: RELATING TO RENEWABLE ENERGY.

DESCRIPTION: Requires the PUC to explicitly consider the effect of the State's reliance on fossil fuels on lifecycle greenhouse gas emissions and gives the PUC the discretion to require a lifecycle greenhouse gas emissions assessment for energy projects that do not involve the combustion of fuel. Effective 7/1/3000.

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 require a lifecycle greenhouse gas emissions assessment for energy projects that do not involve the combustion of fuel. 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 renewable generation and new biofuel contracts come before the Commission. This is because the lifecycle carbon intensity (gCO₂e/MJ) for different biofuels, which include solid, liquid, and gaseous fuels, 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 and appreciates the discretionary authority over GHG analyses for these types of projects.²

The Commission suggests removal of the defective date and believes this bill should become effective on passage.

Thank you for the opportunity to testify on this measure.

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).

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).

² See 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>.



STATE OF HAWAII
HAWAII CLIMATE CHANGE MITIGATION & ADAPTATION
COMMISSION
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Testimony of
Leah Laramee
Coordinator, Hawai'i Climate Change Mitigation and Adaptation Commission

Co-Chairs:
Chair, DLNR
Director, OPSD

Commissioners:
Chair, Senate AEN
Chair, Senate WTL
Chair, House EEP
Chair, House WAL
Chairperson, HTA
Chairperson, DOA
CEO, OHA
Chairperson, DHHL
Director, DBEDT
Director, DOT
Director, DOH
Chairperson, DOE
Director, C+C DPP
Director, Maui DP
Director, Hawai'i DP
Director, Kaua'i DP
The Adjutant General
Manager, CZM

Before the Senate Committee on
Agriculture and Environment

Monday March 11, 2024

1:00 PM

State Capitol, Via Videoconference, Conference Room 224

Offering Comments on
House Bill 2390 House Draft 2
RELATING TO RENEWABLE ENERGY

House Bill 2390 HD2 requires the PUC to explicitly consider the effect of the State's reliance on fossil fuels on lifecycle greenhouse gas emissions and gives the PUC the discretion to require a lifecycle greenhouse gas emissions assessment for energy projects that do not involve the combustion of fuel. **The Hawai'i Climate Change Mitigation and Adaptation Commission (Commission) supports this measure.**

The Commission is a multi-jurisdictional effort between 20 different State and county departments, and Legislative committees. The state has mandated goals to be carbon net negative by 2045 and the HD2 version of this bill supports efforts to achieve that goal. 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 Carbon intensity for different biofuels is wide-ranging and is highly dependent on feedstock characteristics, fertilizer application, growth characteristics, and processing methods the lifecycle GHG emissions from bioenergy may not always exhibit emissions lower than that of fossil fuel.

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) at p. 218.

² See In re Haw. Electric Light Co, Inc., SCOT-22-0000418 (2023).

This bill aligns with the 2023 HSEO Decarbonization Report, Chapter 5 and the state's efforts to be carbon net negative by 2045. The 2024 Priority Climate Action Plan³ recently released by the Commission identifies numerous projects that support these goals by looking at and reducing lifecycle carbon emission. By giving the PUC flexibility to require GHG analysis for non-combustion projects this bill will ensure we are taking the correct steps to achieve these goals.

Mahalo for the opportunity to testify in support of this measure.

³ Climate Change Mitigation and Adaptation Commission (2024) Hawai'i Priority Climate Action Plan <https://climate.hawaii.gov/wp-content/uploads/2024/03/Hawaii-PCAP-FINAL-March-1-2024-1-3.pdf>



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COMMITTEE ON AGRICULTURE AND ENVIRONMENT

Senator Mike Gabbard, Chair

Senator Herbert M. "Tim" Richards, III, Vice Chair

DATE: Monday, March 11, 2024

TIME: 1:00 PM

PLACE: Conference Room 224

RE: HB2390 HD2 RELATING TO RENEWABLE ENERGY

SUPPORT

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

Life of the Land is Hawai`i's own energy, environmental and community action group advocating for the people and `aina for 54 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.

After a Life of the Land appeal, the Hawaii Supreme Court issued the first of four HELCO-Hu Honua decisions in 2019. Thereafter the Public Utilities Commission started requiring life cycle greenhouse gas emission analysis in all applications filed with the Commission.

As many as 100 or more life cycle greenhouse gas emission analysis have been filed with the Commission.

CO2e/kWh	Technology
Negative	Energy Efficiency
Very Low	water, wastewater, and telecommunications utility applications hydroelectric, and geothermal
Low	solar, wind, and storage
High	fossil fuel combustion
Very High	Biomass combustion -- biogenic (waste) and non-biogenic (trees)

The Commission's greenhouse gas requirement, HRS §269-6(b)(4), was modified by Act 82 (HB561), SLH 2021. "The public utilities commission shall determine whether such analysis is necessary for proceedings involving water, wastewater, or telecommunications providers on an individual basis."

HB2390 HD2 proposes to further refine what type of projects need a life cycle greenhouse gas emission analysis. "Lifecycle greenhouse gas emissions[?] for projects involving the combustion of fuel; 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."

The bill also provides a definition: "Lifecycle greenhouse gas emissions assessment" means the evaluation of potential greenhouse gas emissions over the course of a project's lifetime or stages of the production and use of a fuel, which includes, as applicable, upstream stages such as extraction and processing of raw materials, manufacturing and processing of materials, and transportation; operations; and downstream stages such as transportation, decommissioning, recycling, and the final disposal."

Life of the Land asserts that the 2021 amendments and the 2024 proposed amendments correctly focus on the GHG that is needed.

The Hawaii Supreme Court issued its MECO-Paeahu decision in 2022.
<https://cases.justia.com/hawaii/supreme-court/2022-scot-21-0000041.pdf?ts=1646269347>

HRS chapter 269 imposes an obligation on the PUC to consider fossil fuel-related harms and promote climate change mitigation. HRS § 269-6(b) reflects this overarching mission. This statute applies to "all of the [PUC's] duties"; it requires the commission "to reduce reliance on fossil fuels and to consider [GHG] emissions." In re MECO, 141 Hawai'i at 263, 408 P.3d at 15. The legislative history reveals an intent to require the PUC to consider "the hidden and long-term costs of reliance on fossil fuels." Id.

The legislature believed those costs included "potentially harmful climate change due to the release of harmful [GHG]." Id. (quoting H. Stand. Comm. Rep. No. 1004, in 2011 House Journal, at 1332). Besides HRS § 269-6(b), HRS chapter 269 contains additional provisions reflecting the legislature's concerns about climate change and the resulting push toward renewable energy. See, e.g., HRS § 269-27.2 (providing guidance on utilization of non-fossil fuel-generated power supply); HRS § 269-92(a) (imposing renewable portfolio standards).

Please pass the bill,
Mahalo
Henry Curtis
Executive Director



**Hawaiian
Electric**

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

**HB 2390, HD2
Relating to Renewable Energy**

Monday, March 11, 2024
1:00 PM
State Capitol, Conference Room 224

James Abraham
Associate General Counsel
Hawaiian Electric

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 **strong support** of HB 2390, HD2, Relating to Renewable Energy.

This bill aims to clarify the types of proceedings before the Public Utilities Commission (“PUC”) that require greenhouse gas (“GHG”) analyses and limit the required analysis to projects that concern combustion of fuel while providing the PUC discretion to order such analysis for other projects as needed. This additional analysis should generally be limited to generation projects that include operational fuel combustion as opposed to renewable generation projects, such as solar and wind, that do not combust fuel for electric generation and therefore do not entail such GHG emissions.

This bill requires lifecycle GHG analyses for combustion projects to ensure the PUC is fully informed in its decision-making, which aligns with the intent of HRS § 269-6(b). The emissions of a proposed combustion project will be analyzed by examining the three main stages of potential direct and indirect GHG emissions: upstream,

operations, and downstream. Recognizing that not all projects include the same level of emissions at these various stages, the stages will be assessed as applicable to the particular project at issue. For all projects that do not involve the combustion of fuel, the PUC would retain discretion to require a GHG analysis on a case-by-case basis.

We support this bill because it would reduce administrative inefficiency, save time and lessen costs not only for Hawaiian Electric and its customers, but also the PUC and the Consumer Advocate which spend significant resources on GHG analyses.

Hawaiian Electric appreciates the opportunity to testify in strong support of HB 2390, HD2. Thank you.



Testimony to the Committee on Agriculture and Environment
March 11, 2024, 1:00 PM
VIA Video Conference & Conference Room 224, Hawaii State Capitol
HB2390 HD2

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

Hawaii Clean Power Alliance (HCPA) **supports** HB2390 HD2, requires the PUC to explicitly consider the effect of the State's reliance on fossil fuels on lifecycle greenhouse gas emissions and gives the PUC the discretion to require a lifecycle greenhouse gas emissions assessment for energy projects that do not involve the combustion of fuel.

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. This bill 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. These non-combustion-based technologies make an additional expensive study unnecessary.

While renewable energy projects offer great opportunity to reduce the high cost of energy, burdensome and duplicative studies erode that savings.

We ask the committee to pass this bill.

HB-2390-HD-2

Submitted on: 3/9/2024 4:37:16 PM

Testimony for AEN on 3/11/2024 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Jacqueline S. Ambrose	Individual	Support	Written Testimony Only

Comments:

Aloha,

Yes to requiring the PUC to explicitly consider the effect of the State's reliance on fossil fuels on lifecycle greenhouse gas emissions and gives the PUC the discretion to require a lifecycle greenhouse gas emissions assessment for energy projects that do not involve the combustion of fuel