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Testimony of
MARK B. GLICK, Chief Energy Officer

before the
**SENATE COMMITTEES ON
ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM
AND
AGRICULTURE AND ENVIRONMENT**

Tuesday, January 30, 2024
1:01 PM
State Capitol, Conference Room 229 and Videoconference

Providing Comments on
SB 2102

RELATING TO RENEWABLE ENERGY.

Chairs DeCoite and Gabbard, Vice Chairs Wakai and Richards, and members of the Committees, the Hawai'i State Energy Office (HSEO) offers comments on SB 2102 that eliminates biomass from the renewable portfolio standard definition of "renewable energy."

The topic of bioenergy, which includes biomass, was evaluated in HSEO's 2024 publication, *Hawai'i Pathways to Decarbonization Report*, submitted to the Hawai'i Legislature in December of 2023.¹ The relevant recommendation, the second item on page 10, is to consider lifecycle carbon intensity for biomass, biofuels, and certain hydrogen produced from renewable resources.

Recommendation

Update the HRS §269-91 to include lifecycle carbon intensity requirements for "renewable energy sources," specifically (7)

¹ Hawaii State Energy Office. *Hawai'i Pathways to Decarbonization*. 2023. https://energy.hawaii.gov/wp-content/uploads/2024/01/Act-238_HSEO_Decarbonization_Report.pdf

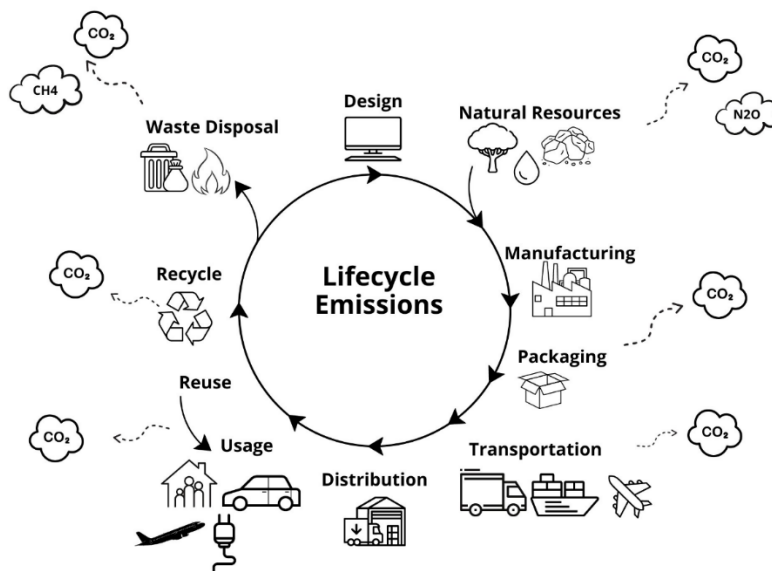
biomass and (8) biofuels, and (9) hydrogen produced from renewable energy.

Rationale

Certain biofuel and biomass energy sources exhibit lifecycle emissions higher than that of fossil fuels when evaluated “farm to pump.” While the PUC is required to evaluate lifecycle emissions, a carbon intensity threshold would clarify carbon requirements for all parties involved. Setting a maximum carbon intensity threshold does not negate the need for appropriate evaluation under HRS §269-6.

Discussion on this begins on page 218 of the report.²

Lifecycle greenhouse gas analysis quantifies or evaluates the environmental impact of specific products or systems throughout their entire lifecycle - from extraction and assembly through distribution, use, to disposal and more...



Lifecycle Analysis Considerations common for typical products consumed in the state.

Currently, the Hawai'i Public Utilities Commission (PUC) is required to “consider the need to reduce the State’s reliance on fossil fuels through energy efficiency and increased renewable energy

² Ibid, [page 218](#).

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). This is a valuable analysis critical to ensuring energy projects for regulated utilities reduce net GHG emissions.

While the PUC is required to consider the lifecycle greenhouse gas emissions when making project decisions, there are no set standards for the utility, or applicant, to follow when completing the lifecycle analysis, nor are there statutory mandates or thresholds (i.e., fuel standards or carbon intensity thresholds) that must be met by renewable energy projects with gross emissions. Further, most PPA applications’ GHG analyses are completed in proprietary software, and system boundaries and assumptions are determined by the applicant. Recent dockets and Hawai’i Supreme Court decisions have underscored the role of the PUC in conducting project-specific GHG analyses for projects seeking PPAs...

Therefore, it may be more appropriate to set carbon intensity standards to incentivize low carbon energy resources and to penalize higher carbon energy resources rather than to completely eliminate a renewable resource. This should be done with accurate methodology and parameters to compare lifecycle carbon emissions. This approach would be consistent with Hawaii’s Renewable Portfolio Standard that supports reducing carbon emissions in addition to the primary objective of moving beyond Hawai’i’s dependence on imported fuels and continuing to grow a local renewable energy industry³⁴

HSEO acknowledges the importance of reducing emissions of greenhouse gases and supports efforts to recognize the benefits of lower-carbon energy sources while continuing to strengthen and diversify Hawaii’s energy supplies.

Thank you for the opportunity to testify.

⁴ Act 97, Session Laws of Hawaii 2015. https://www.capitol.hawaii.gov/slh/Years/SLH2015/SLH2015_Act97.pdf