House Committee on Energy & Environmental Protection

Informational Briefing Testimony
Submitted by:
Mark B. Glick, Chief Energy Officer
Thursday, March 12, 2026

Chair Lowen, Vice Chair Perruso, and members of the Committee, thank you for the opportunity to present the findings of the Alternative Fuels, Repowering, and Energy Transitions Study (Study). The Study was released online in January 2025 on the Hawai'i State Energy Office's (HSEO) website to ensure full transparency. Materials made publicly available include the full report, technical appendices, lifecycle greenhouse gas documentation, ENGAGE model documentation, a weighted analysis of greenhouse gas calculations, a fuels comparison summary including greenhouse gas impacts, and a summary of economic impacts and fuel data prepared by Facts Global Energy. On the same day, Governor Green released Executive Order 25-01, also prepared by the HSEO, to accelerate Hawai'i's energy transition to 100 percent renewable energy on all islands except O'ahu. For O'ahu, which hosts roughly one million residents across only 600 square miles, Executive Order 25-01 prioritizes immediate emissions and cost reductions, while reaffirming the state's commitment to decarbonizing by 2045.

Background

Following the Act 238 Decarbonization Pathways Report by HSEO (2024) and the tragedy of the Lahaina Wildfires, Governor Green tasked the Hawai'i State Energy Office with building a plan to attract new capital to the state's energy economy while reducing costs and carbon emissions. Given the financial stresses on Hawaiian Electric (HECO), this investment would aim to improve grid reliability, integrate more renewables, and finally break the electricity sector's persistent over-reliance on fuel oil. The Study responded directly to this charge from the Governor and was designed to identify options economically compelling enough to attract capital to build new energy infrastructure and

keep Hawai‘i on track to meet or exceed its renewable energy agenda under the Clean Energy Initiative.

Before describing the Study, I want to be perfectly clear: HSEO fully supports the existing legal requirement to shift to renewable energy no later than 2045, and it supports honoring Act 238's call to fully decarbonize by 2045. This unwavering commitment permeates our work, as reflected in Executive Order 25-01 and other recent efforts to explore geothermal energy potential, expand rooftop solar, create a workplace charging program for the state, track state building energy use, replace diesel buses with electric ones, promote Energy Savings Performance Contracting, assist the counties with modernizing building energy codes, recognize private sector leadership in sustainability, support timely permitting of renewable energy projects, seek federal funding that supports the state's goals, identify resilience needs and investment priorities, partner national energy lab expertise with community energy leaders, and help establish a keiki-to-career energy workforce development efforts.[1]

Based on this recent work, HSEO also believes that new combustion power plants are necessary to achieve RPS requirements and will likely remain important for reliability beyond 2045. Our position on new power plants is supported by the Decarbonization Pathways Report, the Study that followed, and is corroborated by the work of third parties, including the University of Hawai‘i.

I'll briefly summarize the key findings of the Study:

1) The status quo power generation and fuel scheme under the Integrated Grid Plan (IGP) is not acceptable for attracting capital for an affordable, decarbonized, and resilient energy ecosystem.
2) Stage 3 and IGP RFP thermal projects will result in one of two outcomes:
    a. Substantially higher electricity prices if biofuels are available and the PUC approves their costs, or
    b. Continued reliance on liquid oil-based fossil fuels, such as Low Sulfur Fuel Oil or ultra-low sulfur diesel.
3) Improving power plant efficiency by replacing and upgrading aging power plants on O‘ahu that include combined cycle gas turbines (CCGTs) is a primary means of reducing electricity costs and carbon emissions.
4) Replacing low-sulfur fuel with natural gas as the principal fuel on O ‘ahu to generate electricity will contribute significantly to carbon emissions and reduce costs under certain conditions and guardrails, including a total phase-out by 2045.

[1] This work supporting clean transportation, efficiency, and renewable development is built on the foundation of HSEO's leadership of Emergency Support Function #12 under the state's disaster response framework.

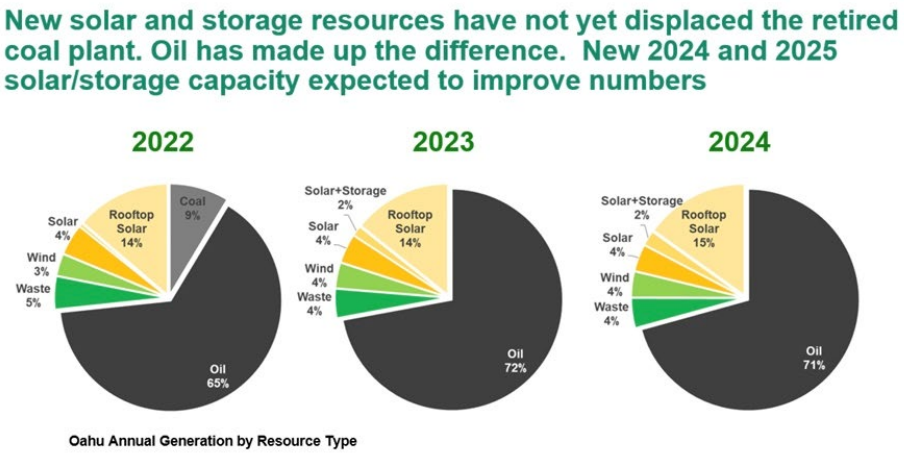
a. See Page 57 of the Study and the Technical Appendix C – Economic Analysis for Full Details on Economic Assumptions, which make clear the economic conditions under which natural gas could be considered a benefit, as well as when it would not.

5) Doubling down on renewable development must happen in tandem with power plant upgrades and fuel switching efforts.
6) Greater efficiency and flexibility in power plants enhances the integration of renewables into the grid.

In short, the Study found that the most favorable outcomes in terms of cost, carbon reduction, and ability to attract low-cost capital would result from replacing and upgrading to high-efficiency power plants on Oʻahu and using the fuel preferred by power plant manufacturers to operate those units. Continuing to operate power plants on non-optimal fuels increases operation and maintenance (O&M) costs and reduces overall efficiency, resulting in higher fuel consumption, increased operating costs, and greater emissions. The fuel choice also impacts how effectively these plants can accommodate fluctuations in renewable energy output. As an example of increased O&M costs, a combined cycle turbine power plant that uses residual fuel oil must replace its impellers every two years due to pitting and scaling of the impellers from using improper fuel. As such, the efficiency of a power plant cannot be considered independently of fuel choice; efficiency is inherently linked to the fuel used for operation, with significant cost implications.

Additional Background and Detail on The Study

In assessing the renewable fuel mix post-2045, the Study makes clear that it represents an early-stage assessment, and significant advancements in technology and further planning will be necessary to refine its feasibility. The market for fuels like green hydrogen and ammonia is projected to fully develop in the next ten years. Should these technologies not mature or realize cost-efficacy as anticipated, renewable natural gas, biodiesel, and renewable diesel remain as potential options for firm generation in dual-fuel power plants. According to HNEI, new solar and storage resources have not yet fully replaced the retired coal plant, with oil-fired generation making up part of the difference. This information was presented by the Hawaiʻi Natural Energy Institute at the Hawaiʻi Energy Conference in May 2025 and is referenced in HSEO's 2025 Annual Report.



(Rocheleau, 2025)Figure 8 Hawai'i Natural Energy Institute, "Repowering and Resilience" Panel, 2025 Hawai'i Energy Conference

The Study has stimulated deep interest and discussion in many venues and among many stakeholders, leading to detailed engineering and investment proposals and agreements among interested parties on specific solutions to manifest the purpose and objectives of the Study. To the extent additional laws or regulations appear necessary to ensure that these fossil fuels are permanently eliminated from the state's energy portfolio as quickly as possible and no later than 2045, HSEO looks forward to constructive dialogue with this Committee, other lawmakers, and other agencies to triple down on the state's existing obligations and promises.

Purpose of the Study

I will discuss the purpose, findings, and outcomes of the Study, which impact the electricity sector on the island of Oʻahu, and have broader implications on our economy and environment, on businesses big and small, and on everyday people. As you know, Governor Green has been laser-focused on affordability, making affordable housing his signature issue. Additionally, the impacts of the Maui Wildfires in August of 2023 have made reliable, resilient, and affordable energy a major priority of this Administration. Civil Beat reported on the severity of this issue over 12 months from 2023 to 2024, when one-third of state residents cut back on basic necessities so they could pay their electricity bill, according to a Lending Tree report. A quarter of Hawaiʻi residents were unable to pay part or all of their energy bill, according to that same report, based on U.S. Census Bureau surveys.[2]

Anyone who compares state electricity costs using U.S. Energy Information Administration data finds the cost of electricity in Hawaiʻi for residential customers has approached three

[2] Hay, J. (2025, February 19). *Data dive: Consumers sacrifice to pay Hawaiʻi's record electric bills*. Civil Beat. https://www.civilbeat.org/2025/02/data-dive-consumers-sacrifice-to-pay-hawai%CA%BBis-record-electric-bills/

times the national average for the past several years. Unfortunately, this has long been the norm on O'ahu and throughout the state for several decades, exacerbated by geopolitical instability and supply chain disruptions, and more recently, rollbacks to federal funding of renewable initiatives. While these circumstances may make the development of intermittent renewable energy technologies more challenging, they do not alter the grid's fundamental need for firm, dispatchable power generation.

The purpose of the Study was to assess alternatives for residual and diesel fuel and selected thermal generators used for power generation with the goals of finding opportunities for:

- Providing cost savings and carbon emission reductions.
- Rapidly mitigating high oil prices and volatility associated with liquid petroleum-based fuels.
- Attracting capital to support sustained operations and improvements in electrical system operations to sustain Hawai'i's energy transition, improve reliability, and reduce economic risk to ratepayers and energy stakeholders post-Maui Wildfires.

It is important to keep in mind that each of Hawai'i's six independent island grids has a unique electrical energy generation portfolio. Each must provide enough power and have enough reserve to maintain reliability. Solar, supported by batteries, provides 23 percent of the energy mix. Bottom-of-the-barrel fuel oil provides about 69 percent.

The seeds for the Study emerged when it was entirely unclear how much of the total liability stemming from the Maui wildfires might be faced by Hawaiian Electric and other entities. You may have heard Governor Green speak candidly about how the leadership of Indo-Pacific Command urgently requested that the Governor do all he could to keep Hawaiian Electric from bankruptcy to avoid an uncertain future for the stability and integrity of our grid. With its creditworthiness at junk bond status, the cost of capital to finance projects would increase significantly, translating to even higher electricity prices in the future. Governor Green tasked me, as Chief Energy Officer, with finding ways to reduce costs and carbon in such a way that would attract capital to keep our energy system vital in light of the historical realities of our electric grid. I'll briefly summarize these long-standing challenges that have been long ignored.

Hawai‘i’s power plant efficiency is far below the national average – The Energy Information Agency shows that the US Average of all fossil-fueled power generation is ~40%.[3] Powerplant efficiencies of individual Hawai‘i powerplants are located on page 27 of the Lifecycle Greenhouse Gas Analysis and Technical Documentation.[4] By comparison, the average efficiency of power plants on O‘ahu is 32%, meaning a larger share of fuel is lost during generation, increasing both fuel consumption and associated costs.

The state’s firm power deficit comes from the aged, inefficient power plants in the current Hawaiian Electric system. The trend of forced outages in the past 10 years has increased significantly, with O‘ahu and Hawai‘i Island being the most vulnerable. Forced Outage Factors show an increasing unavailability of firm generation due to unplanned outages. All this to say that O‘ahu, under the current power plant arrangement, has an enhanced risk of brownouts and outages. On page seven of the study, HSEO clearly points out that “with the increasingly unreliable condition of the thermal power plant fleet, HSEO included in the evaluation of options for power plant investment in this Study. Further, considering Hawaiian Electric’s current position, the state has a fiduciary responsibility to understand the options and impacts of outside investment regarding necessary thermal plant modernization, grid improvements, and the facilitation of market-priced power purchase agreements in the near term.”

Hawai‘i is the only state in the nation that generates most of its electricity from oil-fired generators – and it is the only state in the nation that does not use natural gas for power generation as part of a diversified portfolio. The electricity sector on O‘ahu has the worst carbon intensity of any state in the United States, save Puerto Rico, which also relies on old power plants burning fuel oil.[5] In the past five years, Hawai‘i has imported crude oil and petroleum products for power generation from Russia, Libya, Argentina, Brazil, and Alaska. Today, Libya and Argentina are our top suppliers. The Libya Fuel Depot has been a recent source of one-third of Hawai‘i’s crude oil. With new data, HSEO has traced fuel imports all the way from the oil field. When looking at the source fuel depots of Sarir and Massala Oil fields coming from Libya, HSEO has observed the conditions under which the state gets many of its dedicated shipments. These oil production fields include open pits where crude oil is stored, resulting in substantial methane and other toxic emissions, and

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[3] Energy Information Administration (2023) Table A6 Approximate heat rates for electricity https://www.eia.gov/totalenergy/data/browser/index.php?tbl=TA6#/?f=A&start=1949&end=2023&charted=5-6-7-8

[4] HSEO (2025) Lifecycle Greenhouse Gas Analysis and Technical Documentation - Alternative Fuels Analysis https://energy.hawaii.gov/wp-content/uploads/2025/01/3-Lifecyle-Greenhouse-Gas-Emissions-Documentation.pdf

[5] U.S. Environmental Protection Agency. (2024). *Emissions & Generation Resource Integrated Database (eGRID)*.

flares burning associated gas without any treatment as part of routine operations 24 hours a day, 7 days per week. Under the fuel contracts currently in place, Hawai‘i has no control over where these fuels are sourced. Ultimately, Hawai‘i’s continued dependence on imported oil not only exposes the state to extreme price volatility and geopolitical risk but also ties its electricity system to some of the most carbon-intensive and environmentally damaging fuel supply chains in the world.

HSEO notes the observations of the Consumer Advocate (CA) regarding the role of thermal generation as a significant cost driver for electricity consumers. The CA attributes about 56% of operational expenses related to fuel oil and purchased power to thermal generation Independent Power Producers (IPPs). Fuel oil costs account for about 41 percent, and purchased power costs for thermal generation account for about 15 percent. Replacing this fuel presents a clear opportunity to lower bills for residents.

In addition to the power plant deficiency in thermal generation, maintaining forward progress on renewable generation has been challenging for a variety of factors.
The substantial solar and battery capacity needed to accelerate the energy transition has been adversely affected by a variety of economic impacts post-COVID, including the Russian invasion of Ukraine and the Maui Wildfires. These impacts include inflation, supply chain disruptions, increased financing for renewable projects due to Hawaiian Electric’s credit rating, federal tariffs, and the roll-back of federal tax credits. Everything we are hearing from HECO and independent power producers is that costs are going up. Add to this community, and political backlash to renewable projects, particularly the opposition to onshore and offshore wind projects, and the list of near-term prospects for decarbonizing 68% of O‘ahu’s generation with renewable energy grows even shorter.

These near-term headwinds are exacerbated by the federal government’s refusal to permit offshore leases for wind, which both HECO and HSEO models identified as critical to 2045 success. The 400 MW capacity of offshore wind in the HECO IGP appears extremely unlikely to meet the 2045 deadline, which means O‘ahu will need new technology to meet renewable, net-zero emission requirements. Such setbacks in offshore wind led Hawaiian Electric to call for the addition of 2,230 GWh of renewable energy to fill the gap, prompting HSEO to explore additional opportunities to reduce our excessive carbon emissions. If these needs cannot be met through renewable resources, the remaining alternative is fuel-based generation—and under the current system, that fuel remains both the most expensive and the most carbon-intensive option available.

Lifecycle Greenhouse Gas Analysis – Addressing Greenhouse Gas Emissions

Act 54, Session Laws of Hawai'i 2024, set forth an explicit requirement to analyze lifecycle emissions for combustion projects. HRS §269-1, as amended, defines lifecycle greenhouse gas emissions assessment as "the evaluation of potential greenhouse gas emissions over the course of a product, program, or project's lifetime or stages of production, construction, operations, and decommissioning, which includes but is not limited to, as applicable, upstream stages such as extraction and processing of materials, and transportation; operations stages such as the use of any fuels or feedstocks and the production of any materials; and downstream stages such as transportation, decommissioning, recycling, and the final disposal."

Consistent with this statutory requirement, the Study applied lifecycle analysis to evaluate the relative carbon intensity of various alternative fuels used for electricity generation. The analysis incorporated emissions from upstream fuel production and processing, liquefaction, transportation, regasification, distribution, and combustion. Importantly, the methodology examined emissions under both 20-year and 100-year Global Warming Potentials (GWPs), allowing the analysis to capture both the short-term and long-term impacts of GHGs, particularly methane, which is more potent over a shorter GWP. Emission factors from multiple studies, including measurement-based (top down) and activity and engineering or process-based (bottom-up), were used; and weighted to derive the estimated reduction in carbon intensity (emissions per kWh of electricity delivered).

The Study estimated that natural gas can result in a potential ~ 38% to 44% reduction in total lifecycle emissions per kWh of electricity delivered between LNG and imported oil, for 20-year and 100-year GWPs, respectively. The study compared modeled lifecycle estimates against multiple measurement-based and empirically derived datasets, including peer-reviewed lifecycle inventories and observed emissions measurements from existing natural gas and petroleum supply chains. These comparisons were used to validate assumptions regarding upstream methane leakage, fuel processing emissions, and combustion performance.[6] Both global estimates and local estimations from likely source countries were used.

All analyses demonstrate the need to eventually phase out natural gas and only use it as a bridge fuel. While LNG offers a more immediate opportunity to reduce emissions while

[6] HSEO (2025) Lifecycle Greenhouse Gas Analysis and Technical Documentation - Alternative Fuels Analysis https://energy.hawaii.gov/wp-content/uploads/2025/01/3-Lifecyle-Greenhouse-Gas-Emissions-Documentation.pdf

achieving cost savings in the near term, the prolonged use of LNG is not consistent with international, national, and state GHG targets.

Lifecycle Cost Analysis (LCCA)

In addition to Lifecycle Greenhouse Gas emissions, the Study also dealt with lifecycle cost (LCCA), which evaluated capital, O&M, fuel costs, and interim RPS penalties for base and build cases. Construction activities and decommissioning were not included in the Study's LCCA. Key assumptions are noted below:

- **Base case:** No gas transition; firm generation remains LSFO. IGP assumptions generally apply to a larger load. Waiau Repowering costs not included (details on repowering not available at time of study).
- **Build case:** Gas infrastructure added; LNG displaces LSFO generation.
- **Heat rates:** Weighted averages used to convert fuel price forecasts to $/MWh.
    - Base case – used existing capacity factors and heat rates
    - Build case – used specifications and model outputs
- **Load growth:** Higher than IGP due to vehicle electrification. Compliant with state targets established in *Navahine* Settlement
    - Based on Hawaiian Electric's *Conservative Electrification* forecast.
    - Consistent with transportation electrification targets.
- **Scope:** Oʻahu only; new CTs are dual-fuel (gas/diesel) and hydrogen-compatible.
- **Discounting:** Costs and benefits discounted to present value using Hawaiian Electric's real rate of return.
- All gas-only infrastructure (FSRU, offshore pipelines) phased out by 2045.

Infrastructure Investments and Power Plant Replacements & Upgrades

The main additional infrastructure to import LNG to Hawaiʻi would be a Floating Storage Regasification Unit (FSRU) located about 3 miles offshore at Campbell Industrial Park, adjacent to where crude oil is currently offloaded offshore. An FSRU has the overall appearance of vessels that are currently moored in that area to offload crude oil.

There would be a Subsea pipeline from the FSRU to Oʻahu, some of which would be directionally drilled in the subsea and arising onshore in a pipeline easement, where it would likely be connected to mostly existing gas pipelines owned and operated by Hawaii Gas, as well as 1-2 miles of new connecting pipeline to the power plants.

The Study offered a scenario through existing pipeline easements to connect to a new power plant at the former AES Coal Plant site at Barbers Point, as well as to Campbell Industrial Park and Kalaeloa Partners L.P. power plants.

Initially, natural gas conversion analysis looked at converting or replacing select power plants on Oʻahu, Maui, and Hawaiʻi Island. Analysis was based on capacity targets from

the National Renewable Energy Lab, recently renamed the National Lab of the Rockies (NRL), and grid modeling.

Results at the time of the Study indicated delivering gas to all islands would not benefit ratepayers, due to the increased costs of storage and interisland transport; therefore, the decision was made to limit the use of LNG to Oʻahu only.

The Study did not include two other power plants for which performance and emissions would be significantly improved if they operated on natural gas: the planned 99MW power plant at Pearl Harbor to be built by Ameresco and the Waiau Power Plant. At the time of the Study, the cost of Hawaiian Electric's proposed upgrades to six units of the Waiau Power Plant had a Best and Final Offer ("BAFO") of $847 million. Hawaiian Electric's updated Application seeks approval of a revised project cost of approximately $1.155 billion, representing a 36 percent increase from the BAFO bid price under the Stage 3 Request for Proposals ("Stage 3 RFP"). This magnitude of post-selection price escalation materially alters the Project's economic profile and it raises serious questions regarding compliance with Section 4.6.3 of the Stage 3 RFP, which limits post-BAFO price increases to a one-time, capped adjustment of up to 10 percent for inflation, as well as the Competitive Bidding Framework. Under the RFP and Competitive Bidding Framework, price changes of this magnitude should prompt either re-procurement or a waiver from the Competitive Bidding Framework. The proposed repower also equates to approximately $4.6 million per MW, which is substantially higher than commonly cited capital cost benchmarks for simple-cycle combustion turbine projects in other U.S. jurisdictions, which are typically in the range of $1.0 to $1.6 million per MW. Presumably, pursuing four units, rather than six, would only exacerbate this cost-per-megawatt imbalance. While HSEO recognizes that projects in Hawaiʻi may carry higher costs than mainland projects, the revised estimate remains materially elevated even after accounting for Hawaiʻi-specific factors. HSEO has addressed these concerns in a statement of position filed with the PUC on March 9, 2025.

Renewable Forecast Changes

At the time of the Study, Hawaiian Electric's resource plans included 400MW of offshore wind. Without this capacity, Hawaiian Electric estimates it will need to procure an additional 2,230 GWH of energy by 2036. Under a recently passed City and County ordinance, much of the existing onshore wind generation would be removed from the North Shore in the next decade, and only some of that capacity can be replaced with solar in the same sites. Additionally, HECO procurements have not proceeded at the pace assumed necessary by HSEO studies, and so the build rates for solar assumed in the

report are aggressive. HSEO projects a needed utility-scale build-out rate of 95MW/Year from 2030, while average build rates of utility-scale solar since 2014 are approximately 41MW/year.

The PUC has recently relaunched HECO's long-term resource planning process, known as the Integrated Grid Plan, and incorporated the impacts of recent federal policy changes, tariffs, inflation, and other key feasibility factors for the pace of renewable energy development. This process will create an updated Preferred Path for HECO's compliance with the RPS.

Private Sector Interest in Fuel Switching Investments

The Study concluded that fossil fuel reductions must remain a priority of the state to meet its constitutional responsibilities. Another key objective was to find pathways to rapidly counter Hawai'i's constant exposure to high oil prices and volatility, which will remain as long as petroleum-based liquid fuels are the dominant power generation fuel. HSEO has been approached by JERA, Shell, Woodside, Samsung Heavy Industries, and others on their willingness to invest in the state.

JERA, Inc, and JERA Americas

Guided by the findings of the Study, JERA Inc. and JERA Americas, Inc. signed a Strategic Partnership Agreement with the State of Hawai'i on October 9, 2025, to collaborate in support of future power generation projects to be pursued by JERA and local energy stakeholders with the support of the Hawai'i State Energy Office. These projects aim to modernize grid infrastructure, accelerate the retirement of aging assets, and enhance system reliability and resilience, contributing meaningfully to Hawai'i's clean energy transition. The Parties will develop efficient power development strategies, permitting pathways, and creative financing strategies—including leveraging JERA's access to lower-cost capital—coordinating plans on the procurement of long-lead equipment.

JERA has established a Zero CO_2 Emissions objective by 2050, reflecting a corporate commitment to eliminating CO_2 emissions from domestic and international operations by 2050. JERA has also set a corporate goal to reduce CO2 emissions from domestic operations by at least 60% (relative to FY 2013) by FY 2035 through the following means:

- Given the expanded adoption of renewable energy based on the national government's 2050 carbon-neutral policy, JERA will strive to develop and adopt renewable energy in Japan.

- JERA will work to reduce carbon emission intensity from thermal power generation by promoting conversion to hydrogen and ammonia.

With shared values to achieve full decarbonization, the Strategic Partnership seeks to develop ways to achieve Hawai'i's decarbonization and clean energy goals via a comprehensive, system-wide approach beyond power generation and consider supporting the development of energy transition infrastructure. This may include initiatives related to low- and zero-carbon fuels (e.g., renewable natural gas, hydrogen, sustainable biofuels, and, where appropriate, LNG), fuel logistics and distribution networks, modernization of legacy infrastructure, and the integration of renewable technologies at scale.

Consistent with the Study's objective to attract capital, JERA Americas has access to low-cost capital to fund such a project and develop on a faster timeline than the Waiau Project's anticipated full in-service date of 2033. JERA is proposing an alternative to incremental power plant upgrades by taking a holistic, energy-system view of capital investments to achieve the State's energy strategy.

HSEO points out that any new analyses that include engineering and modeling, as well as production cost and grid impacts, will supersede the Study's desktop analysis of options, which was intended only to demonstrate the feasibility of various scenarios to achieve cost and carbon emissions savings and other Study objectives.

Next Steps

HSEO's objective was to identify options to attract investment to modernize the state's energy infrastructure, especially important in light of the financial uncertainties faced by HECO following the August 8 wildfires. HSEO appreciates the progression of discussions that have followed the realm of possibility evaluated in the Study. Further, the Study challenged the private sector to come up with capital plans for consideration, and that goal has been achieved. The current state of play is:

- As a desktop technical feasibility analysis, outreach and engagement with key stakeholders, communities, and regulatory or permitting agencies beyond the scope of the Study are now ongoing.
- Shipping industry demand for LNG exists, given that Matson and Pasha currently operate container ships on LNG. As Matson CEO Matt Cox recently told Pacific Business News, the new vessels Matson is introducing "use LNG fuel, which is less

expensive than conventional fuels. As a result, fuel surcharges will be reduced or moderated."

Based on additional analysis, integrating energy stakeholders such as Hawaiian Electric, Hawai'i Gas, Pasha, and others into the energy transition strategy is taking place. The next steps we expect to see the following take place in the coming weeks and months are:

1) Updated plans that yield significantly higher benefits than those estimated in the HSEO Study and reflect broader stakeholder support and participation, and
2) Front-End Engineering Design, and
3) Immediate commencement of critical regulatory processes.

Thank you for the opportunity to testify on this recent work.