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# OFFICIAL STATEMENT OF THE HAWAIʻI STATE ENERGY OFFICE

*Regarding Testimony Submitted to the House Committee On Energy & Environmental Protection, March 12, 2026*

**FOR IMMEDIATE RELEASE**
March 19, 2026

In response to a request from Committee Chair, Rep. Nicole Lowen, Chief Energy Officer Mark B. Glick testified on the findings of the Alternative Fuels, Repowering and Energy Transition Study (study) published in January 2025 by the Hawaiʻi State Energy Office. A written report of Mr. Glickʻs testimony can be referenced here.

This statement further clarifies the position of the Hawaiʻi State Energy Office in response to a subsequent letter from the Chair of the House Committee on Energy & Environmental Protection, dated March 12, asking:

1.) whether the Hawai'i State Energy Office (HSEO) concurs about the existence of the error identified by Dr. Matthias Fripp in a particular section of the Alternative Fuels, Repowering, and Energy Transition Study ("Study"),
2.) if fuel costs were excluded from the Study's analyses,
3.) whether this was intentional, and
4.) the rationale for the exclusion.

More to the point, HSEO is providing clarity on the accuracy of claims that any omission of data in the scenario, Alternative 3A, alters the viability and alleged benefits of the scenario and the Study.

When taking into consideration the actual analytical results of Alternative 3A and the other Key Alternatives in the Study, 1A, HSEO fully stands by the Conclusion and Next Steps of the Study as presented on pages 77-79. HSEO also concurs with Dr. Fripp of an error in Alternative 3A, when corrected, results in a lower positive net present value for that Alternative. The error and its impacts are best explained by HDR Inc., the contractor that oversaw the preparation of the life cycle cost analysis (LCCA), and whose calculator worksheet contained the error in question.

HDR delivered the attached memorandum to HSEO on March 19, 2026, confirming an unintentional algebraic syntax error found in the LCCA calculator worksheet.

- HSEO and HDR confirm a syntax error in the "Calculator" tab of the LCCA spreadsheet.
- The error was unintentional.
- HDR discovered no other syntax errors in the key alternatives, and therefore, the positive net present value of Scenario 1A holds.
- HSEO and HDR will soon update the Study to remove Scenario 3A and otherwise correct for the error.
- Given the positive net present value of 1A, HSEO notes that the correction identified by Dr. Fripp to 3A will have no material impact on the published Conclusions and Next Steps of the Study.

For further context, the LCCA was one of many analyses conducted during the development of the Study. The Study incorporated multiple analytical approaches to develop and evaluate alternatives and scenarios. These included: 1) Capacity expansion modeling, completed with assistance from the National Lab of the Rockies (NLR), formerly National Renewable Energy Laboratories (NREL); 2) A bookend analysis, completed by HDR which included Maui and Hawai'i Island, but was ultimately excluded due to high estimated costs and the policy objectives of Executive Order 25-01; and, 3) an Alternatives analysis (or scenario analysis), which included Alternatives 1 through 3, completed by HDR. It is important to note that the

greenhouse gas analysis was distinct from the LCCA, by HDR, and was completed with the assistance of ICF.

In addition, Facts Global Energy ("FGE") provided fuel costs and additional analysis, included in the appendix of the report. Fuel costs from FGE were intended to be included in all scenarios and analyses evaluated.

Separate analysis by FGE indicated cost savings with natural gas on the order of hundreds of millions of dollars, comparing natural gas to fuel oil. Further, capacity expansion models consistently selected gas as part of the lowest cost portfolio. Accordingly, HDR's results for 3A appeared consistent with the broader body of analysis and results. As a result, the syntax error in the relevant Excel row unfortunately went uncorrected.

As a remedial action, HSEO will update the Study by removing all references to Alternative 3A from the report, given its redundancy to Alternative 1A, as noted by Dr. Fripp. We appreciate his diligence in pointing out the syntax error to the House Committee.

The findings in HSEO's Study identifying LNG as a cost-effective component of lowering the State's carbon emissions and promoting additional renewable energy integration onto the grid are not in dispute. The JERA proposal of March 17 goes well beyond the estimated savings in the HSEO Study, with conclusive cost savings of 20% over oil (an average of $500/year per household) and 50% savings over imported biofuels, with LNG infrastructure paid back in less than 2 years.

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# Technical Memorandum

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| **To:** | Hawai‘i State Energy Office |
| **From:** | HDR |
| **Project:** | Alternative Fuel, Repowering, and Energy Transition Study |
| **Date:** | 3/19/2026 |
| **Subject:** | Supplementary Review |

## 1.0 Background

HDR Engineering, Inc. (HDR) was the consultant on the Alternative Fuels, Repowering, and Energy Transition Study (“Study”), commissioned by the Hawai‘i State Energy Office (HSEO). As part of a broader scope, HDR performed an economic evaluation of alternatives developed during the Study and provided HSEO with a working copy of an evaluation spreadsheet.

After HDR was notified by HSEO of a potential error in the evaluation spreadsheet raised by Dr. Fripp, two HDR staff members conducted separate supplementary reviews of HDR’s evaluation spreadsheet. One person was previously involved in the Study, while the other was an independent reviewer with modeling expertise.

## 2.0 Findings

The supplementary reviews confirmed that HDR misplaced a parenthesis in a formula for the calculation of Levelized Cost Savings per MWh on O‘ahu, which resulted in excluding liquified natural gas (LNG) fuel costs for Alternative 3A. Figure 19 on Page 60 of the Study final report shows no sensitivity of the results to the cost of LNG. This parenthesis was missed in HDR’s original review process of the Study and was not the result of direction from HSEO. The results for Alternative 3A are not valid and should be removed from the report.

The analyses for Alternatives 1 and 2 are not impacted as they correctly include LNG fuel costs. **Alternatives 1 and 2 should still be considered valid.**

Alternative 1, which involves transitioning from LNG to hydrogen as a firm source of renewable energy, continues to have a positive NPV (ranging from $150 million to $308 million depending on the Renewable Portfolio Standards [RPS] targets met). Alternative 2, which envisions a non-hydrogen renewable energy future, continues to have a negative NPV (ranging from -$206 million to -$364 million depending on the RPS targets met).

During the supplementary review, HDR also found that the results are less impacted by changes in capital costs than originally stated in the Study final report.

## 3.0 Study Scope

The Study captured only a subset of the full range of benefits for the evaluated alternatives due to the Study’s limited scope. In recognition of the need for firm dispatchable capacity on the grid, the Study analysis was limited to firm generation energy. Page 8 of the Study final report notes: “the study is focused on the combustion power plant, or firm generation, component of the electric grid, particularly on O‘ahu.”

As noted on Page 14 of the final report, the Study was limited to a desktop technical feasibility analysis and the actions discussed would require further analysis. The Study was intended to provide data, background, and context to guide and inform future feedback and evaluation.

As a result of limiting the scope to firm generation, the Study excluded certain costs that would have increased the NPV of all the alternatives. Some of the excluded costs included, but were not limited to:

- The Study did not consider the generation capacity costs from solar or biodiesel plants that would need to be constructed in the absence of LNG. This results in lower costs for the base case without LNG.
- Due to the avoided generation capacity costs, renewable energy was treated as a free resource with no fuel cost.
- Energy storage (i.e., battery energy storage) and associated costs were excluded from the analysis.

In addition, the Study used a set of conservative assumptions to challenge the cost effectiveness of LNG. This results in a lower NPV and sets a higher bar for LNG to demonstrate benefits exceeding costs. Relaxing these assumptions would increase the NPV for all alternatives considered in the study.

Some of the conservative assumptions included, but were not limited to:

- The Study quantified the impacts associated with firm fuels only. Renewable energy generation was external to the model. The Study scope was to evaluate alternatives to LSFO, given the needs for firm capacity on the grid.
- The Study estimated operating and maintenance (O&M) cost savings based on the cost differential between older and new power generation infrastructure. Actual and forecasted O&M costs at existing Low Sulfur Fuel Oil (LSFO) plants were not available, which may reflect increased costs as infrastructure ages.
- The Study excluded the increased reliability benefits that would occur due to future major upgrades and conversions to existing generation infrastructure.
- The Study excluded resilience and reliability benefits from modernized transmission infrastructure.
- The Study excluded fuel price volatility by using average fuel cost estimates for LSFO and LNG.