HAWAII STATE ENERGY OFFICE
STATE OF HAWAII

JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LT. GOVERNOR

MARK B. GLICK
CHIEF ENERGY OFFICER

235 South Beretania Street, 5th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-3807
Web: energy.hawaii.gov

Testimony of Mark B. Glick

Chief Energy Officer of
Hawai‘i State Energy Office

Before the House Committee on Energy and Commerce
Subcommittee on Oversight and Investigations

on

“Investigating the Role of Electric Infrastructure in the Catastrophic Maui Fire”

September 28, 2023

Chairwoman McMorris Rodgers, Chairman Duncan, Chairman Griffith, Ranking Member Pallone, Ranking Member Castor, and Members of the Committee:

My name is Mark Glick and I have served as the Chief Energy Officer of the Hawai‘i State Energy Office by appointment of Governor Josh Green since January 16, 2023.
As I noted in my September 19, 2023, response to the Committee’s letter of August 30, my office appreciates the thorough exploration of the causes and effects of the tragic events that occurred on August 8, 2023. We share the nation’s resolve to stand with the people of Lāhainā in their quest to heal, grieve, and fully recover. We also share your vision that a productive dialogue in this hearing, under the leadership of this Committee and its subcommittees, can meaningfully assist communities across the nation to better prepare for extreme weather events that are becoming all too commonplace.

In helping Hawai‘i and other states prevent deadly wildfires in the future, we welcome and appreciate the bipartisan support to improve capacity for life-saving response efforts and the long road to recovery after a disaster. We also welcome the bipartisan interest of the Committee, and we look forward to incorporating specific suggestions and federal funding into our continued response.

We wish to reiterate our appreciation for the support from the U.S. Department of Energy and the Biden Administration in approving $95 million through the Bipartisan Infrastructure Law to harden Hawai‘i’s electric grid. Among the intended uses of this funding are the strengthening of two critical transmission lines in Maui and others and targeted installation of stronger, fire-resistant poles that serve critical facilities such as hospitals, water facilities, emergency response, and military.

Hawai‘i’s leadership in pursuing energy self-sufficiency by adopting the nation’s first 100% renewable portfolio standard is due to our deep concern over oil price volatility, which is extremely detrimental to our economy and cost of living. Hawai‘i’s oil is sourced primarily from Africa, Europe and Asia, and is not linked to the more favorably priced Henry Hub index. During the latest run-up of oil prices due to Russia’s invasion of Ukraine, oil volatility impacts increased Molokai’s diesel costs for electricity generation from roughly $4.8 million in 2021 to $8.1 million in 2022 – a 40% increase in one year.[1] A simple economic analysis of “the cost of doing nothing” based on the 2021-2022 average annual diesel cost of $6.5 million projected over the next 25 years showed that approximately $162 million in diesel savings could be available to help pay for Molokai’s transition to renewable energy.[2]

Emerging Threats of Extreme Precipitation and Wildfires

Hurricane Lane in August of 2018 may have been the first extreme weather event in Hawai‘i that revealed how the interactions between the atmospheric and biophysical conditions could line up in a manner to greatly exacerbate the risk of wildfires.[3] In the wake of Hurricane Lane, wildfires on both Maui and O‘ahu were ignited and spread quickly due to the prevalence of nonnative grasses in longer wet periods that quickly dehydrate during dry periods. Extremely high downslope winds caused a rapid spread of wildfires under those conditions, especially on exposed leeward slopes.

HSEO understanding of the sequence of events and actions on August 8, 2023, involving the Lahaina fire, including actions taken by Hawaiian Electric

HSEO has participated in discussions with the Attorney General and other parties regarding this event and is aware that investigations are ongoing by the Attorney General and other parties with respect to Hawaiian Electric’s actions, including self-assessments by Hawaiian Electric. With investigations by qualified agencies underway, it would be inappropriate for HSEO to opine on those events at this time. However, this event and the response to it is obviously a top priority for the Governor, and HSEO expects that the results of those investigations will be helpful in informing additional measures and recommendations for limiting future wildfires and their ill effects.

Actions taken by Hawaiian Electric, Hawaii Public Utilities Commission, Hawai’i State Energy Office and any other applicable entities regarding efforts to mitigate invasive grasses and other vegetation on the island of Maui, in order to prevent or minimize fire risks

Actions taken by HSEO to mitigate invasive grasses and other vegetation on the island of Maui are embodied in policy recommendations, programs, and assistance consistent with HSEO’s

[1] Molokai Clean Energy Hui, *Molokai Community Energy Resilience Action Plan* (June 2023), https://www.molokaicleanenergyhui.org/molokai-cerap *supra* note **Error! Bookmark not defined.**, at 67.
[2] *Id.*
[3] Fire and Rain, The Legacy of Hurricane Lane in Hawai‘i, Alison D. Nugent, Ryan J. Longman, Clay Trauernicht, Matthew P. Lucas, Henry F. Diaz, and Thomas W. Giambelluca, Online publication June 2020, https://journals.ametsoc.org/view/journals/bams/101/6/BAMS-D-19-0104.1.xml

responsibilities as prescribed by statute. The primary authorizing legislation[4] for the HSEO reads, in relevant part:

> "(b) The Hawaii state energy office shall:
> (1) Provide analysis and planning to actively develop and inform policies to achieve energy efficiency, renewable energy, energy resiliency, and clean transportation goals with the legislature, public utilities commission, state agencies, and other relevant stakeholders;
> (2) Lead efforts to incorporate energy efficiency, renewable energy, energy resiliency, and clean transportation to reduce costs and achieve clean energy goals across all public facilities;
> (3) Provide renewable energy, energy efficiency, energy resiliency, and clean transportation project deployment facilitation to assist private sector project completion when aligned with state energy goals; and
> (4) Engage the private sector to help lead efforts to achieve renewable energy and clean transportation goals through the Hawaii clean energy initiative."

HSEO is led by Hawai‘i's Chief Energy Officer, whose duties are also governed by statute. In relevant part, that statute reads:

> "(d) Subject to the approval of the governor, the chief energy officer shall:
> (1) Formulate, analyze, recommend, and implement specific policies, strategies, and plans, in coordination with public and private sector stakeholders, to cost-effectively and equitably achieve the State's energy goals; …
> (4) Coordinate the State's energy programs with those of the federal government, other territory and state governments, the political subdivisions of the State, departments of the State, and governments of nations with interest in common energy resources; …
> (9) Develop and maintain a comprehensive and systematic quantitative and qualitative capacity to analyze the status of energy resources, systems, and markets, both in-state and in other states and countries, particularly in relation to the State's economy, and to recommend, develop proposals for, and assess the effectiveness of policy and regulatory decisions, and energy emergency planning;
> (10) Develop and recommend programs for, and assist public agencies in the implementation of, energy assurance and energy resilience; … [and]
> (16) Identify and recommend policies to align utility goals with those of ratepayers, including evaluating utility models that best support state energy goals."[5]

Consistent with the statutory responsibilities of HSEO and the Chief Energy Officer, HSEO actively develops policies to achieve renewable energy and energy resiliency with the legislature, public utilities commission, state agencies, and other relevant stakeholders. A key part of HSEO's broader mission is to support public and private actors in enhancing energy resilience,

[4] Hawai‘i Revised Statutes §196-71 (Hawaii state energy office; established).
[5] Hawai‘i Revised Statutes §196-72 (Chief energy officer of the Hawaii state energy office; duties).

short of serving in any oversight or enforcement role. Consistent with Presidential Policy Directive 21 (2013),[6] HSEO takes an "all hazards" approach to resilience. This approach enables HSEO to coordinate effectively under Emergency Support Function #12 within the Federal Emergency Management Agency's (FEMA) National Disaster Recovery Framework (NDRF),[7] and pursue activities under HSEO's areas of statutory authority.

One such activity in which HSEO has been engaged is a multi-island, multi-hazard disruption exercise planned with the U.S. Department of Energy Office of Cybersecurity, Energy Security, and Emergency Response (CESER) called "Clear Path XI." DOE, HSEO, and other partners spent over a year planning this exercise, which was scheduled for August 15-16, 2023, but it has been suspended so that the participants can address the emergency response efforts in Maui.

Clear Path XI will be focused on both cyber incident and hurricane response impacts to Hawai'i and other U.S. Pacific Island Territories. Joining the Hawai'i State Energy Office in the exercise will be Hawaiian Electric, Par Pacific / Par Hawai‘i, the Electricity Information Sharing and Analysis Center, Kauai Island Utility Cooperative, Edison Electric Institute, the Hawai'i Air National Guard, Hawai'i Army National Guard, Hawai'i Emergency Management Agency, Hawai'i Office of Homeland Security, INDOPACOM, CYBERCOM, Office of the Secretary of Defense (OSD), Joint Staff (JS), U.S. Department of Energy (CESER), and the Office of Intelligence and Counterintelligence (IN).

Consistent with HSEO's statutory authority, HSEO also participated from July of 2019 to November 2021 in the Resilience Working Group established under the Integrated Grid Planning (IGP) process of Hawaiian Electric Company (HECO), as directed by the Hawai‘i Public Utilities Commission (HPUC). A principal outcome of the Resilience Working Group was a Working Group Report that recommended a variety of resilience measures, including vegetation management, and evaluated different scenarios, including wildfire impacts.

The Resilience Working Group (RWG) gathered a broad cross section of industries, academia, and county, state, and federal governmental agencies that have an interest in grid resilience, including HSEO, branches of the U.S. Department of Defense, and Maui County. The working group considered a dozen hazards, both natural and man-made. As described in the Resilience Working Group Report for Integrated Grid Planning from 2020, the RWG goals were to: 1) Identify and prioritize resilience threat scenarios and potential grid impacts; 2) Identify key customer and infrastructure sector capabilities and needs following a severe event and loss of power; 3) Identify gaps and priorities in grid and customer capabilities following a severe event and loss of power; 4) Provide recommendations and inputs for the IGP to address resilience needs; 5) Recommend additional grid and customer actions to close gaps in capabilities following severe events; and 6) to identify opportunities and locations to enhance grid resilience that may provide greater public benefits.

[6] https://www.energy.gov/ceser/presidential-policy-directive-21
[7] https://www.fema.gov/emergency-managers/national-preparedness/frameworks/recovery

The RWG identified five threats as most relevant to grid resilience planning:[8] Hurricanes; Earthquakes and tsunamis; Volcanos (Hawai‘i Island); Wildfires; and Physical and Cyber-attacks. Among the actions recommended by the RWG are:

- Partner with key customers and the government to develop microgrids for power that can be isolated from the grid when needed (severe events).
- Plan for additional crews during emergencies and provide more robust and regular training for emergency situations.
- Expand critical resources, supplies, backup equipment, and materials to restore damaged circuits, substations, or generators more quickly following severe events.
- Plan for emergency access to additional helicopters on the islands to support repairs in remote, difficult to access sites.
- Plan for enhanced vegetation management, particularly in critical grid areas susceptible to damage from wind and falling or flying debris.
- Continue hardening or reinforcing critical transmission circuits, including upgrading wind criteria and flood mitigation, upgrading structures, and using enhanced construction methods and materials.
- Continue efforts at enhancing physical and cyber security of assets, resources, and systems.
- Continue planning for expanding underground cables (water resistant) and locating equipment outside flood prone areas.
- Consider alternative paths for transmission circuits to increase diversity of location and enhance performance during severe events.
- Establish one or more priority circuits with enhanced restoration capabilities and greater hardening.
- Continue to require that new RFPs for renewables bids include grid-forming inverters, meaning they can provide a blackstart capability.
- Consider adopting advanced technologies in a more distributed resource approach, including grid-forming renewable energy sources, battery storage, and joint projects with key customers to provide microgrid capabilities for emergency and backup operations.
- Develop wildfire mitigation strategies for worst case wildfire event at Maalaea.

[8] https://www.hawaiianelectric.com/clean-energy-hawaii/integrated-grid-planning/stakeholder-and-community-engagement/working-groups/resilience-documents

- Develop and test capabilities of expanded use of drones for emergency response and regular maintenance inspections.
- Evaluate options for distribution automation, digital meters, and associated communications networks, which can be valuable in assessing system conditions, the extent of outages, and how to best prioritize recovery efforts to get key customers reenergized more quickly.

The RWG identified mitigation and resiliency recommendations for key customers and critical infrastructure sectors:

- Infrastructure owners and operators work together in close partnerships to coordinate disaster planning and recovery. Recovery and risk mitigation are shared responsibilities between the power companies, key customers, and the government.
- Key customers develop and implement load management/load curtailment capabilities to limit power usage to mission critical loads during emergencies with loss of offsite utility power.
- Key customers maintain ample onsite fuel supplies for generators during extended power outages and transportation disruptions and have in place plans and fuel supply arrangements resupply fuel for outages exceeding operational expectations; coordinate resupply plans so that multiple facilities, sectors, and geographic areas are not relying on the same fuel resources at the same time; provide backup power sources that can supply essential loads during prolonged outages and emergencies; test and exercise backup power resources.
- Under their Continuity of Operations Planning (COOP), key customers should consider relocating essential functions to alternative facilities at sites/locations with more robust infrastructure support.
- Key customers consider developing plans and arrangements for deployment of temporary emergency power generators that can be relocated to critical sites during prolonged outages.
- Key customers consider partnering with Utilities and the government to develop local microgrids for power that can be isolated from the grid when needed (during severe events); consider alternative technologies, such as renewables and storage, and other blackstart resources.
- Key customers in the transportation sector ensure availability of adequate road clearing equipment to speed recovery of key roads, ports, and airports.
- Key customers reinforce harbors and port facilities against catastrophic flooding and storm damage to ensure they can maintain maritime operations during extended power outages.

- Customers maintain training and exercise programs that address performing emergency and contingency operations with loss of utility power.

The RWG recap was provided to the Hawai‘i Public Utilities Commission on November 9, 2021.[9]

Hawaii State Energy Office involvement in grid modernization, hardening, and resilience efforts by Hawaiian Electric

Recent HSEO efforts on grid modernization, hardening and resilience efforts with HECO and HPUC are described below. Please note that other energy stakeholders are involved as well.

1) **O‘ahu Energy System and Critical Infrastructure Vulnerability and Resiliency Assessment funded by Federal Energy Management Agency’s Hazard Mitigation Grant Program (“Advance Assistance” Program Grant)**

The Advance Assistance program grant is a $600,000 grant from FEMA Hazard Mitigation Grant Program (HMGP), which requires 25% cost share, generally.[10]

The Advance Assistance program grant, entitled "Advance Assistance, Energy and Critical Infrastructure Vulnerability and Resiliency Assessment HMGP #4395-05-02, Supplement #2," includes conducting and reporting on a comprehensive inventory and baseline assessment of Oahu’s major energy supply, distribution, and demand networks, and the State’s critical infrastructures. This program grant supports Community Lifeline energy security planning as an effective means to mitigate devastating energy-sector impacts on O‘ahu communities, and potentially cascading impacts on the state resulting from natural and man-made disasters. The results will identify mitigation actions in support of the State of Hawai‘i Hazard Mitigation Plan and related state-level risk/vulnerability priorities. The project covers electric, liquids, and gas energy infrastructure.

HSEO included HECO and other energy providers in the development of a Common Operating Picture (COP) for the energy sector, which mapped the energy supply chain on O‘ahu. As the operator of the electric grid on O‘ahu, HECO was responsible for the execution of the COP consistent with the direction provided by the HPUC in docket 2020-0090.[11]

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[9] https://www.hawaiianelectric.com/a/10002

[10] https://www.fema.gov/fact-sheet/summary-fema-hazard-mitigation-assistance-hma-programs

[11] See HPUC Final Decision and Order 38757 in Docket 2020-0090 available at: https://hpuc.my.site.com/cdms/s/puc-case/a2G8z0000007f8lEAA/pc20796. See also HSEO’s Phase 2 Statement of Position in the same docket at page 7: “A comprehensive COP [common operating picture] is necessary and recommended in order to more fully understand the capabilities, linkages, and the impacts of a material change to these integrated elements of the energy supply system on the system as a whole; and to enable a more definitive assessment of the current state of the energy environment and the public interest on statewide energy assurance risk.”

The overall project goals are:

1) Focusing on energy security for state-owned or operated buildings and critical infrastructure and facilities and reducing the long-term energy vulnerability of Hawai‘i residents and property to natural hazards, while conserving the State’s natural, historical, and cultural assets.
2) Prioritizing mitigation actions designed to ensure long-term energy resilience.
3) Strengthening partnerships among energy suppliers and critical facility management within the City and County of Honolulu to identify/determine appropriate energy mitigation actions.
4) Utilizing available methods, technology, and local knowledge, analyzing natural hazards and assessing energy lifeline capabilities to reduce the impact of those hazards on energy systems and capabilities in Hawai‘i.
5) Promoting interagency and cross sector awareness of natural hazard risks and actions to reduce the long-term risks to energy systems in Hawai‘i.
6) Providing a Hawai‘i-specific framework for robust energy sector hazard mitigation planning and mitigation strategy implementation in alignment with State and private sector planning processes to enable the implementation of mitigation strategies.

This Advance Assistance project supports better informed decision-making through enhanced capacity for:

1) Sequencing response efforts including the rapid re-establishment of lifeline services or deployment of contingency response solutions to restore critical lifeline functions (energy focused).
2) Honing optimal methods to evaluate critical energy and lifeline facilities.
3) Informing an updated State Energy Security Plan required by IIJA section 40108 and improvements to on-going updates to state energy inventory data under the Energy Industry Information Reporting Program (EIIRP).
4) Rigorously identifying areas on O‘ahu to determine possible/best follow on mitigation actions.
5) Scoping and prioritizing energy hazard mitigation projects in Hawai‘i to incorporate sustainability, resilience, and renewable energy concepts.
6) Collecting and incorporating energy data for more accurate Benefit-Cost Analysis, which is needed to compete for funding available for advanced energy projects made available by FEMA’s Building Resilient Infrastructure and Communities (BRIC), as well as meeting other funding requirements that require historical preservation of this information.

This Advance Assistance project is in its final stages and scheduled for completion in October 2023. An initial analytical review shows that wildfire risk is a high risk along with hurricanes and flooding. This differed with the lower ranking of wildfire risk by energy stakeholders who were surveyed and asked to rate the top threats.

2) **Advance Assistance 2.0 – Kauai, Maui, and Hawaii Counties Energy System Resiliency Assessment Advance**

The Advance Assistance 2.0 grant is a proposed $450,000 grant from FEMA HMGP, which requires 25% cost share for states, generally. This project would be the second phase of the Advanced Assistance project discussed above for O‘ahu, with this round of funding supporting analysis for Kaua‘i, Maui, and Hawai‘i counties. HSEO collaborated with HECO in developing the COP for the energy sector. This phase of the Advance Assistance project aims to accomplish similar goals as the first phase but on different islands. The benefits for this phase of the Advance Assistance project are similar to the first phase discussed above. While this project has been “Identified for Further Review” by FEMA BRIC, HSEO expects this project to be approved and moved forward sometime within the next 12 months based on our assessment of the FEMA review process to date.

3) **Ko’olaupoko Critical Customer Hubs**

The Ko’olaupoko Critical Customer Hubs project is an estimated $8.33 million grant from FEMA BRIC, with 30% cost share provided by HECO; BRIC can provide up to 90% cost share.

The Ko‘olaupoko region is one of O‘ahu’s most vulnerable communities with respect to availability of electricity for critical infrastructure. This area is served by three electricity transmission lines that traverse the Ko‘olau mountains from the west and central O‘ahu generating stations. The lines are at risk from high-speed winds and can only be reached by helicopter when repairs are needed.

HSEO has consulted with HECO on the project proposal. The hubs are similar to microgrids, with distributed generation and associated control equipment, and would work with HECO on project implementation if awarded. Unlike many grid controls, the control systems will be mobile, so they can be pre-positioned and reallocated as needed. They can also be safely stored after use.

This project will develop three Critical Customer Hubs in the Ko‘olaupoko region. This project will also harden the distribution infrastructure in the hub’s boundary. The public benefits are that the hubs will also reduce down-time and quickly restore power to essential critical community facilities during emergencies. This is another project that FEMA BRIC has “Identified for Further Review” that HSEO believes will likely move forward.

4) **Infrastructure Investment and Jobs Act (IIJA) 40101(b) Competitive Application**

HSEO has applied for a $59,693,753 competitive award under IIJA 40101(b), DOE’s Grid Resilience and Innovation Partnerships,[12] to deploy distributed energy resources with advanced controls to allow for aggregation of capacity and the provision of grid services.

[12] https://www.energy.gov/gdo/grid-resilience-and-innovation-partnerships-grip-program

- DOE funding will be used to establish a $500 per kilowatt hour (kWh) BTM battery upfront incentive, so those batteries can be installed for free in approximately 10,000 low and moderate income (LMI) customer homes.
- The project will reduce barriers to widespread adoption of resiliency and clean energy solutions by demonstrating a viable program to offer an affordable behind-the-meter (BTM) resiliency solution to low-to-moderate income (LMI) customers and increase access to clean distributed energy resources (DER).
- The project will improve the ability of LMI customers and communities to respond to outage events and work towards recovery from all hazard emergencies by supplying backup power to community centers and other emergency resource locations in disadvantaged communities (DAC), as well as reduce the LMI communities' requirements of emergency services during events.

HSEO has led the application for funding under the IIJA for this statewide program. If awarded, both HECO and the Kaua‘i Island Utility Cooperative[13] would be partners in this project. HSEO would then coordinate with both utilities in building the grid services program.

This project has not been awarded and no scope has been negotiated with the U.S. Department of Energy. As submitted, the project would enable distributed energy resources to add capacity value to the grid and enable more granular control of distributed energy resources. With the competitive application still under consideration, an accurate assessment of both return on investment and completion date will be set at the time of award.

Funds Received by the Hawai'i State Energy Office from the Infrastructure Investment and Jobs Act of 2021 or the Inflation Reduction Act of 2022 (amount of money, the program under which the funding was awarded, and the type of funding)

At the time of this hearing, the HSEO has been awarded the following under the IIJA:

- DOE State Energy Program formula grant funds[14] under IIJA section 40109 awarded in February 2023 totaled $3,512,680. DOE program guidance[15] provides up to $200,000 to create or update a State Energy Security Plan required by IIJA section 40108, and HSEO has allocated $150,000 for this task. The same amount of funding has been allocated to train HSEO staff to become ESF #12 responders. The results of the Advanced Assistance project described above will be incorporated.
- DOE Preventing Outages and Enhancing the Resilience of the Electric Grid Program formula grant funds[16] under IIJA section 40101(d) awarded in June 2023 totaled $6,090,547, with a state match of $913,582. This amount reflects two program years of

[13] https://www.kiuc.coop/
[14] https://www.energy.gov/scep/articles/state-energy-program-iija-formula-grant-allocations
[15] https://www.energy.gov/sites/default/files/2022-03/sep-state-energy-security-plan_alrd.pdf
[16] https://www.energy.gov/sites/default/files/2022-05/Grid-Resilience%2040101d%20Webinar%20Final%20%28web%29.pdf

formula grants,[17] and HSEO anticipates additional formula grant funds will be made available in the remaining three program years. This award will fund distributed energy resources and storage to households at-risk of power outages and financially unable to purchase their own standby power assets, consistent with DOE's goal to "demonstrate measurable improvements in energy resilience to all hazards."

HSEO will work with stakeholders across Hawai‘i to pursue additional funding through IIJA and/or Inflation Reduction Act programs, most of which will be competitively awarded. Some additional formula grant funds, such as $756,900 in Energy Efficiency Revolving Loan Fund Capitalization under IIJA section 40502 and $1,639,120 in Energy Efficiency and Conservation Block Grant under IIJA section 40552, are also anticipated.

We have seen no evidence thus far that indicates renewables development has restricted available funds for vegetation management. We expect that the expansion of renewable and distributed energy resources will contribute to the reliability of Hawai‘i's energy system. For instance, micro-grids powered by renewable resources may support wildfire risk prevention, mitigation, and response.

In conclusion, HSEO believes a multi-pronged approach, including prevention, mitigation, and response to wildfire threats is necessary and this involves both short-term and long-term actions. HSEO will leverage federal funding opportunities; collaborations with stakeholders (including industry, trade organizations, local communities, other state agencies, and the federal government); and incorporate lessons learned from the ongoing investigations, other states, and globally to prevent, mitigate, and respond to wildfire events. We expect that some of the short-term actions would include evaluating additional recommendations for vegetation management and public safety power shutoffs and the availability of new technology to limit wildfires and their adverse effects. Some of the long-term approaches for continued exploration include advanced wildfire mitigation planning and investment in technology and data. We also expect that other expanded wildfire management efforts would involve continued exploration of building standards and research to support lifeline sectors, vulnerable populations, communities, and the energy system. We also recognize that much of the problem is located on private property which limits our options as a matter of law. Therefore, the solutions will require a shared commitment of private and public sector will and resources to adequately safeguard our essential energy infrastructure. In the response efforts related to the Maui and Hawai‘i County wildfire tragedy, Hawai‘i expresses its sincere gratitude to the federal assistance we have received thus far, and we humbly request your future support and assistance as we recover and rebuild.

HSEO believes a comprehensive, all-options considered approach is necessary to ensure the safety, reliability, resiliency, and affordability of the State's energy grid in the face of emerging threats.

I am happy to answer any questions you may have.

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[17] https://netl.doe.gov/sites/default/files/2023-05/Allocations%20for%2040101d%20Formula%20Grants%20-%20ALRD%20Amendment%20006.pdf