MEMORANDUM OF UNDERSTANDING BETWEEN
THE DEPARTMENT OF ENERGY,
THE DEPARTMENT OF HOMELAND SECURITY,
THE US PACIFIC COMMAND,
AND
THE STATE OF HAWAII
FOR
CRITICAL ENERGY INFRASTRUCTURE INTERDEPENDENCIES

This is a Memorandum of Understanding (MOU) between the Department of Energy (DOE), represented by the Assistant Secretary for Electricity Delivery and Energy Reliability through the Office of Infrastructure Security and Energy Restoration; the Department of Homeland Security (DHS), represented by the Undersecretary for the National Protection and Programs Directorate (NPPD); the United States Pacific Command (USPACOM), represented by the Chief of Staff through the Logistics, Installations, and Security Cooperation Directorate; and the State of Hawaii (SOH), represented by the Office of the Governor through both the State of Hawaii Department of Defense (DOD) and Department of Business, Economic Development and Tourism (DBEDT). When referred to collectively, the DOE, DHS, USPACOM, and the SOH are referred to as the "Parties".

1. BACKGROUND:

1.1. Based on the 2015 Energy Sector-Specific Plan (SSP), which is aligned closely with the *National Infrastructure Protection Plan 2013: Partnering for Critical Infrastructure Security and Resilience* (NIPP 2013) and the joint national priorities, the broad risk in the energy environment is described as follows:

1.1.1. Electricity Subsector Risks and Threats: Many organizations conduct a wide variety of risk assessments of the Electricity Subsector. For example, the North American Electric Reliability Corporation (NERC) assesses risks in terms of the potential impact to the reliability of the bulk power system, while private companies and utilities examine risks and threats as they relate to the operational and financial security of each company. Based on a review by some of the largest U.S. electric utilities, as well as the analysis by NERC, a wide variety of issues were considered threats in the Electricity Subsector. Despite the differences in what constitutes risk, the Electricity Subsector identified several issues as the key risks and threats to its infrastructure and/or continuity of business in 2012 and 2013:

- Cyber and physical security threats;
- Natural disasters and extreme weather conditions;
- Workforce capability ("aging workforce") and human errors;
- Equipment failure and aging infrastructure;
- Evolving environmental, economic, and reliability regulatory requirements; and
- Changes in the technical and operational environment, including changes in fuel supply.

1.1.2. Oil and Natural Gas Subsector Risks and Threats. The Oil and Natural Gas Subsector, particularly the oil industry, faces a diverse risk landscape due to its worldwide geographic presence, the hazardous and evolving exploration, production, and operating conditions, as well as the various domestic and in some cases foreign regulatory jurisdictions under which it operates. Based on a survey of the 100 largest U.S. exploration and production companies, the following were identified as key risks the oil and natural gas industry faced during 2012:

- Natural disasters and extreme weather conditions;
- Regulatory and legislative changes, including environmental and health as well as increased cost of compliance;
- Volatile oil and gas prices and demands;
- Operational hazards, including blowouts, spills and personal injury;
- Disruption due to political instability, civil unrest, or terrorist activities;
- Transportation infrastructure constraints impacting the movement of energy resources;
- Inadequate or unavailable insurance coverage;
- Aging infrastructure and workforce; and
- Cybersecurity risks, including insider threats.

1.2. The threat environment in Hawaii is further influenced by several other factors:

1.2.1. Oahu is a singularly strategic location for national security, particularly in the Indo-Asia-Pacific region. USPACOM Headquarters, as well as all of its Service Component Headquarters, are housed on the island of Oahu. In addition, the US military comprises approximately 15% of the Oahu electricity consumer base.

1.2.2. The Hawaiian archipelago is located 2,400 mi. (3,900 km.) southwest of the contiguous United States. It is the world's most remote island chain with a sizeable population, estimated at 1.42 million in 2016 (U.S. Census Bureau - http://census.hawaii.gov/home/population-estimate/). Honolulu is the most remote major city of population over 500,000, the nearest city of equal or greater size being San Francisco, 2,400 mi. distant.

1.2.3. Each of Hawaii's major islands is serviced by single electric utility companies and transmission and distribution systems. Hawaii lacks indigenous fossil fuels, depending on imports of petroleum and gas supplies for most of its energy needs, operates on a 'just-in-time' inventory management system, and faces lengthy resupply times for its waterborne imports – to include petroleum. The energy infrastructure does not possess the same level of resiliency and redundancy available in the overlapping, interconnected, and multimodal transportation systems present in the contiguous United States. Additionally, the state's oil and gas supply chain is a hub-and-spoke model, with Oahu being the singular entryway for those products throughout the island chain.

1.3. Applicability of specific legislated provisions for preparations and response provide a potential framework, but preclude applicability in the Hawaiian Islands.

1.3.1. The Fixing America's Surface Transportation (FAST) Act (Pub. L. No. 114-94) was signed into law December 4, 2015. The Act, as well as the (related) Federal Power Act and Energy Policy Act of 2005 all contain key provisions that exclude Hawaii (and Alaska). The basic issue is that these laws regulate electric utility companies engaged in interstate commerce," which by its framework excludes Hawaii and Alaska.

1.3.2. DOE's role in energy sector security is established by statutory and executive authority. DOE is the Sector Specific Agency (SSA) for the Energy Sector under Presidential Policy Directive 21 (PPD-21). In 2015, through the FAST Act, Congress designated DOE as the lead SSA for cybersecurity for the energy sector. The FAST Act also gave the Secretary of Energy new authority, upon declaration of a Grid Security Emergency by the President, to issue emergency orders to protect or restore critical electric infrastructure or defense critical electric infrastructure components of the bulk power system. This authority allows DOE to support energy sector preparations for and responses to cyber, electromagnetic pulse (EMP), and physical attack threats as well as a geomagnetic disturbance (GMD).

1.3.3. Given its physical disassociation with the contiguous United States and its bulk-power system, certain relevant legislation provisions (such as those highlighted above) exclude the state from availing itself of broader, persistent support enjoyed by the contiguous states.

2. AUTHORITIES:

2.1. DOE enters into this MOU under the authority of section 646 of the Department of Energy Organization Act (Pub. L. 95-91, as amended; 42 U.S.C. § 7256).

2.2. DHS enters into this agreement under the authority of sections 102 and 201 of the Homeland Security Act (Pub. L. 107-296, as amended; codified at 6 U.S.C. §§ 112, 121), as well as DHS Delegation 17001.

2.3. USPACOM enters into this MOU under the authority of DOD Instruction 4000.19 "Support Agreements" April 25, 2013.

2.4. SOH enters into this MOU under the authority of Chapters 196, 128A, 128B, and 127A Hawaii Revised Statutes (Energy Resources, Homeland Security, Cybersecurity, and Emergency Management, respectively).

3. UNDERSTANDING OF THE PARTIES: This agreement is a Memorandum of Understanding (MOU) between:

3.1. For the Department of Energy (DOE) --

3.1.1. As the Energy Sector SSA, DOE is the lead Federal agency responsible for industry engagements and partnerships to enhance the security and resilience of critical energy infrastructure, development and deployment of advanced energy technologies, mitigation of risks resulting from cyber and other threats within the energy environment, and expansion of situational awareness, impact testing and mitigation deployment.

3.1.2. Through its Office of Electricity Delivery and Energy Reliability, the Department serves as the lead Federal Government agency and coordinates with industry on collective efforts to modernize the electric grid and enhance the security and resiliency of energy infrastructure. This office leads the Department's efforts to ensure a resilient, reliable, and flexible electricity system and accomplishes this mission through research and development, partnerships, facilitation, modeling and analytics, exercises, and energy preparedness, and emergency response. Within this office, the Infrastructure Security & Energy Restoration (ISER) Division leads efforts to secure the U.S. energy infrastructure against all hazards, reduce the impact of disruptive events, and respond to and facilitate recovery from energy disruptions, in collaboration with other U.S. Federal Government agencies, State and Local governments and trade associations, and industry. The Cybersecurity and Emerging Threats Research and Development (CET R&D) Division leverages strong partnerships with the private sector to strengthen today's cyber systems and risk management capabilities, and develops innovative solutions for tomorrow's inherently secure and resilient systems.

3.1.3. DOE is responsible for coordinating with infrastructure owners and operators to strengthen the resilience of critical energy infrastructure, serves as the day-to-day Federal interface for the prioritization and coordination of sector-specific activities, carries out incident management responsibilities consistent with statutory authority and appropriate policies, and provides technical assistance to the sector to identify vulnerabilities and help mitigate incidents. DOE also works closely with the sector to model potential impacts, enhance situational awareness, and coordinate recovery activities. In addition, through its National Laboratories, DOE has developed world-class capabilities and resources for evaluating the scope and impact of cyber events on the Energy Sector.

3.1.4. DOE and the sector partners coordinate with other Federal agencies that have energy-related response and security responsibilities and programs. DOE will continue to support effective practices and partner, where practical, with these agencies in implementing security and resilience programs. Partnering with DHS, USPACOM, and SOH provides DOE the opportunity to accelerate the deployment of its expertise toward the critical economic and energy security needs of the United States and to promote scientific and technological innovation.

3.2. For the Department of Homeland Security (DHS) –

3.2.1. The DHS National Programs and Protection Directorate leads the national effort to strengthen the security and resilience of the nation's physical and cyber infrastructure.

3.2.2. NPPD's vision is a safe, secure, and resilient infrastructure where the American way of life can thrive.

3.2.3. Our Nation's well-being relies upon secure and resilient critical infrastructure – the assets, systems, and networks that underpin American society. The National Infrastructure Protection Plan (NIPP) – *NIPP 2013: Partnering for Critical Infrastructure Security and Resilience* – outlines how government and private sector participants in the critical infrastructure community work together to manage risks and achieve security and resilience outcomes.

3.2.4. In support of its primary mission, the NPPD established the following organizational goals in the NIPP 2013:

a. Assess and analyze threats to, vulnerabilities of, and consequences to critical infrastructure to inform risk management activities;
b. Secure critical infrastructure against human, physical, and cyber threats through sustainable efforts to reduce risk, while accounting for the costs and benefits of security investments;
c. Enhance critical infrastructure resilience by minimizing the adverse consequences of incidents through advance planning and mitigation efforts, as well as effective responses to save lives and ensure the rapid recovery of essential services;
d. Share actionable and relevant information across the critical infrastructure community to build awareness and enable risk-informed decision making; and
e. Promote learning and adaptation during and after exercises and incidents.

3.2.5. Partnering with DOE, USPACOM, and SOH provides DHS/NPPD an organizing construct for effectively and efficiently executing efforts against these organizational goals.

3.3. For U.S. Pacific Command (USPACOM) –

3.3.1. Distance and austerity provide the logisticians and planners at USPACOM with unique limiting factors that require approaching challenges differently. A Combatant Commander needs to be able to create effects from any single domain to targets in every domain. The challenge, then, is to change the way they think about logistics before the fight, increasing their agility and enabling them to become more responsive and flexible as they fight.

3.3.2. The 2017 USPACOM Supporting Strategy for Energy Security defines the Command's approach to the energy environment in the Indo-Asia-Pacific and aims at mitigating energy related risks through four interlocking concepts: operational reach, integration, interoperability, and resiliency. These concepts assist with shaping the role that USPACOM will play with Allies and Partners in the region. Although technology and logistics have come a long way, USPACOM still faces the persistent challenge of powering energy-demanding weapon systems across the expanse of the region in the midst of a variety of operational environments. This strategy focuses on identifying requirements that will enable warfighter capabilities, increase mission effectiveness, and reduce risk.

3.3.3. Energy security is more than just fossil fuels. Energy is a fundamental enabler of military capability and can come in a number of forms to include renewable energy, energy storage, efficiencies, and stable infrastructure. The ability of USPACOM to project and sustain the power necessary for defense depends on assured access to this energy. It must be available at home and abroad, over great distances, through adverse conditions, and across air, land, and sea, often against determined adversaries.

3.3.4. The 2017 USPACOM Supporting Strategy for Energy Security acknowledges the need to reduce energy risks and ensure energy will never be an operational constraint. Additionally, this supporting strategy captures how USPACOM responds to potential energy disruptions while continuing to fulfill its responsibilities. Ultimately, USPACOM will use this

supporting strategy to manage operational energy and bolster energy security resulting in a more capable warfighting force.

3.3.5. Hawaii is a strategic U.S. asset for the fulfillment of the USPACOM mission. The significance of U.S. presence in the Indo-Asia-Pacific begins with the Hawaii home of not just forces, but the Headquarters of the US Pacific Command, as well as those of all of its Service Components. Beyond its other mission sets, the Command is responsible for Defense Support to Civil Authorities, which is fulfilled concurrent with all of its other responsibilities. The environmental constraints that the State of Hawaii operates under are equally USPACOM's and the imperative to identify risks and enact mitigation will only be effective when acted on in unity.

3.3.6. In the 2017 USPACOM Supporting Strategy for Energy Security the Command provides for oversight and planning through the Joint Energy Security Working Group (JESWG), chaired on behalf of the Chief of Staff through the Logistics, Engineering, and Security Cooperation Directorate (J4). The JESWG incorporates energy security into plans, policy, and operations; to identify energy risks and mitigations; to support current operations with energy security improvements; and to establish, improve, and update energy security reporting requirements.

3.4. For the State of Hawaii -

3.4.1. As noted above, Hawaii's critical infrastructure, including energy, has multiple well known vulnerabilities to both natural and human risks. These direct threats and risks to infrastructure systems range from the well-defined, discrete risks associated with routine and predictable disruptions, to high impact, low frequency risks such as catastrophic events. In addition, however, the State recognizes that its energy assurance is increasingly dependent on supporting and interdependent infrastructures such as transportation, communication, and water and fuel supply that support energy and national security. These interdependent critical infrastructure systems can also be challenged by complex and less well known risks associated with multiple, interacting threats, and/or indirect effects.

3.4.2. State policymakers and leadership are concerned about the impact these disruptions could have on the economy, public health and safety, and the environment. More than 80 percent of the energy infrastructure is owned and managed by the private sector, so identifying critical risk assessment and mitigation approaches and protecting the energy system will require a coordinated effort between federal, state and local officials as well as private entities.

3.4.3. Coordinated planning under the Hawaii State Planning Act (Chapter 226, Hawaii Revised Statutes) for the State's facility systems is directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives. Hawaii state policies also play a critical role in energy security by establishing objectives to ensure that energy infrastructure is resilient and officials can quickly respond to shortages, disruptions and emergencies.

3.4.4. The State of Hawaii's DOD and DBEDT are the lead State agencies responsible for ensuring coordination and cooperation among all organizations for homeland security and

establishing and coordinating programs to preserve and protect the State's energy security, respectively.

3.4.5. DBEDT's Hawaii State Energy Office (HSEO) under Chapter 196, HRS, serves as consultant to the Governor, public agencies, and private industry on energy-related matters and is tasked to 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 those to which Hawaii is directly tied, particularly in relation to the State's economy, and to recommend, develop proposals for, and assess the effectiveness of policy and regulatory decisions, and conduct energy emergency planning.

3.4.6. The HSEO, as the primary and coordinating agency responsible for executing the state-level Emergency Support Function #12 Energy (ESF#12) mission is tasked with maintaining situational awareness and reporting on assessments and restoration of energy systems and resources. This mission is in alignment with national and state strategic and critical infrastructure planning frameworks and plans. In this capacity, the HSEO is responsible for coordinating with federal, state, and county governments, and private sector companies with disruption preparation, response, and mitigation in support of the Governor.

3.4.7. Engaging with energy and interdependent lifeline partners, DBEDT seeks to identify and address vulnerabilities in the state's energy systems and supply chains that have the potential to negatively impact the energy sector. DBEDT collects energy data, analyzes information, and conducts projects related to Hawaii energy infrastructure assets and systems to include risk analyses, supply disruption impacts and shortage response measures. The department also strives to enhance situational awareness of the state's energy infrastructure by developing the technical capabilities required to monitor and respond to potential disturbances in real-time.

3.4.8. DBEDT shares a mutual vision for research collaboration to promote energy security, energy resiliency, and energy assurance. DBEDT has determined that it is in its interest to develop a working relationship with USPACOM, DOE, DHS, and DOD to establish a framework for discussion, information sharing, and cooperation on the project objectives. In addition, DBEDT has determined that the scope of this project is very relevant to the roles and responsibilities of the Energy Resources Coordinator. DBEDT has also determined that the analysis, results, and outcomes of the project could assist DBEDT in fulfilling its statutory duties and responsibilities under Chapters 486J, 125C, 196, and 201, Hawaii Revised Statutes (HRS).

3.4.9. The Hawaii Emergency Management Agency (HI-EMA) is a division under the Hawaii Department of Defense that was established by Chapter 127A-3(a), HRS. This agency was previously known as State Civil Defense. The agency is charged with maintaining a comprehensive, coordinated, and cooperative emergency management program to prepare for, respond to, mitigate, and recover from emergencies and disasters that threaten or impact the State of Hawaii. Energy assurance and the protection and resilience of energy infrastructure are critical components of HI-EMA's mission. HI-EMA utilizes the emergency support function (ESF) system to organize its emergency management program. The primary and coordinating state agency responsible for implementing ESF 12 – Energy is HSEO, as noted in paragraph 3.4.6. It is through ESF-12 that HI-EMA coordinates with the public/private energy entities for

energy assurance and resilience. HI-EMA also participates in the USPACOM-supported Defense Support to Civil Authorities (DSCA) Executive Steering Board (ESB) that coordinates civilian and military training, exercises, and support during actual emergency and disaster events.

3.4.10. Partnering with DOE, DHS, and USPACOM provides the SOH the opportunity to advance its close work with government agencies and private sector companies on energy assurance and critical energy infrastructure protection planning issues; to collaborate on development of tools to inform and educate officials to support energy emergency response activities; and to enhance its activities through various forums, training events, planning initiatives, and disaster exercises for energy, emergency management, and homeland security officials to exchange and share information.

4. PURPOSE: The purpose of this Memorandum of Understanding (MOU) is to identify a framework for cooperation and partnership between the Parties to strengthen coordination of efforts to enhance national and state security. This MOU covers, but is not limited to, electricity, oil and natural gas infrastructure security to include vulnerability analysis and assistance with developing risk mitigation strategies. Specific activities covered under this MOU include, but are not limited to:

4.1. BASELINE. Compilation, aggregation, and establishing an operational and strategic appreciation of available risk and mitigation body of analytical work; identification of gaps and/or overlaps in the known body of analytical work, and constructing and executing a holistic, collective approach to close gaps in analysis with complementary analytical and partnering efforts. This would include information on future plans for changes to the present system(s) and information on the reliability and resiliency of energy system requirements.

4.2. CONSORTIUM. Developing a consortium approach to stakeholder engagement, community outreach, and resiliency engagement to promote unity of effort and networked resilience. The consortium approach will foster innovative partnerships to address challenges by enabling an Energy Resilience Hub, through knowledge development, knowledge sharing, and training and education. The consortium will promote a cooperative energy resilience framework among stakeholders and innovative learning and leader development, building resilient and adaptive leaders and organizations.

4.3. COMMUNICATION. Establishing enduring, supportive, collaborative information sharing mechanisms, consistent with the applicable information sharing and protection laws, policies and procedures. These mechanisms will facilitate data sharing and collaborative analysis while safeguarding the data pools necessary to support risk assessment and mitigation approaches. These mechanisms may also include provisions for sharing Critical Electric/Energy Infrastructure Information, pursuant to 18 C.F.R. §§ 388.112 and 388.113

4.4. OUTCOMES.

4.4.1. Identify comprehensive, integrated critical risk assessment and mitigation approaches.

4.4.2. Leverage Parties' current authorities and efforts underway to address mutual priorities.

4.4.3. Institutionalize a framework established through this MOU for persistent future collaborations.

4.4.4. Establish integrated planning, training and exercise events to feed a continuous improvement process.

5. IMPLEMENTATION:

5.1. EXECUTIVE COMMITTEE: The Parties of this MOU intend to develop and conduct cooperative activities relating to identified high priority strategic and operational energy needs, where such cooperation contributes to the efficiency, productivity, and overall success of the activity. The Parties intend for the activities executed under the MOU to be established by a senior-level Executive Committee. This Executive Committee will be co-chaired by designees of each of the Parties' senior representatives identified in the General Provisions section herein. The Executive Committee will be responsible for the operations and governance of this MOU.

5.1.1. Other members from any of the Agencies that may be involved in the issues or functions of this MOU may be added. Upon enactment of this MOU, the Executive Committee will appoint a team to develop, within 90 days, a charter and operating structure, membership, products, and decision processes.

5.1.2. The charter will identify the necessary activities contemplated by this MOU, will establish required working groups or other organizational bodies to support those activities, will establish an appropriate regular meeting schedule, and will establish the administrative protocols of the committee. Any working groups established by the charter will be in compliance with all applicable laws, regulations and policies, including the Federal Advisory Committee Act (FACA).

5.1.3. The Co-Chairs will be responsible for any reporting to the appropriate Agency leadership and will outline accomplishments, issues, redirections, and change assessments. The reporting will be coordinated by the Co-Chairs as appropriate. The Co-Chairs will be responsible for any reports or presentations that are requested by other organizations, subject to the necessary review of each Party.

5.2. LEVERAGING OPPORTUNITIES: Below is a brief sample of existing mechanisms that in whole or in part may hold potential to leverage towards the activities above-listed under MOU Purpose.

5.2.1. DOE: In June 2010, the DOE and DOD entered into a Memorandum of Understanding Concerning Cooperation in a Strategic Partnership to Enhance Energy Security. The MOU covers, but is not limited to, efforts in the areas of energy efficiency, renewable energy, water efficiency, fossil fuels, alternative fuels, efficient transportation technologies and fueling infrastructure, grid security, smart grid, storage, waste-to-energy, basic science research,

mobile/deployable power, small modular nuclear energy, and related areas. While framed around the development and deployment of advanced energy technologies, its provisions could well apply to efforts covered by this quadrilateral Critical Energy Infrastructure Interdependencies MOU aimed at cultivating an ecosystem of resilience: a network of producers, distributors, regulators, vendors, and public partners, acting together to strengthen our ability to prepare, respond, and recover.

5.2.2. DHS: DHS/NPPD will use its best efforts to provide historical context for and current activities of NPPD as it relates to the energy sector in Hawaii; share assessment reports and data, as appropriate and shareable under information sharing authorities; provide understanding of requirements processes for analytical, training, exercise and other program support capabilities from NPPD; provide access to infrastructure protection and resilience technology tools as appropriate and allowable; share local and regional partnerships and where appropriate, liaison to those partnerships for the purposes of information sharing related to the outcomes of this MOU's work plan.

5.2.3. USPACOM:

- USPACOM launched the "Unified Cause – Enhancing Contextual Awareness (ECA) for Cyber Threat Intelligence and Energy Resilience" effort to support the continuous pursuit for improving capabilities to predict, identify, prevent, and ultimately respond to threats and vulnerabilities (natural and/or man-made) to energy infrastructure systems through the use of big data analytics. The objective of this project is to demonstrate a comprehensive prototype solution that utilizes continuous streaming big data in electrical grid operations and an emergent type of systemic cyber threat awareness for smart grid systems – both concepts being critical to building resilience across the entirety of the energy infrastructure system. The engagement framework currently being developed under Unified Cause is aimed at promoting future stakeholder collaboration and technology/information sharing to build critical/strategic infrastructure resilience – and shows early promise for being an operational element of the overarching Critical Energy Infrastructure Interdependencies MOU activities.

- USPACOM, in partnership with Resurgo, LLC (a Honolulu-based Department of Defense (DOD) contractor familiar with the Command's Campaign of Cyber Experimentation), the Hawaiian Electric Company, and the Naval Facilities Engineering Command (NAVFAC) (transition partner and co-funder), launched Critical Energy Infrastructure Defense-In-Depth under the DOD Environmental Security Technology Certification Program (ESTCP). The intent of the effort is to successfully demonstrate an Intrusion Tolerant Cyber-Secure Defense-In-Depth of an electrical power plant against attacks representative of Tier V/Nation-State actors. It is aimed at exhibiting to the DOD and commercial energy providers a capability to mitigate and recover quickly from online and insider cyber activities directed against Supervisory Control and Data Acquisition (SCADA) infrastructure. The intrusion tolerant focus of the demonstration will show how new technologies employed in a defense-in-depth configuration enable a utility grid SCADA system to "fight through" an attack without disruption of services. The effort holds potential, in the cyber security risk arena, to provide a mitigation approach to a particularly concerning threat-based risk.

5.2.4. SOH:

- In June 2016, the State of Hawaii and the Department of the Navy (Assistant Secretary of the Navy, Energy, Installations, and Environment) entered into a Memorandum of Understanding agreeing to work on energy-related issues of mutual benefit to coordinate goals and to build partnerships whenever possible based on their similar goals relating to the reduction of greenhouse gases, fossil fuel use reduction, energy efficiency, water consumption, use of renewable energy, and alternative fueled vehicles usage. Initial working groups established under this MOU include Alternative Fuels Ground Transportation, Renewable Energy, and the most directly relatable – Resilience/Reliability. The last is focused on the integration of renewables into the grid and increasing grid resiliency to include testing and validation of technology.

- The Department of the Navy/Naval Facilities Engineering Command (NAVFAC) is working on an Infrastructure Modernization and Renewable Integration Project with the University of Hawaii – Hawaii Natural Energy Institute and the Applied Research Laboratory at the University of Hawaii (ARL). Project objectives include decreasing energy costs, stabilizing future energy costs, reducing energy demand from non-renewable resources, and meeting Congressional and Department of Defense requirements, coupled with meeting long-term goals for renewable energy use set by the Department of the Navy. Most germane for this MOU, the effort includes establishment of an information baseline of, amongst other information, the electrical infrastructure and operations of the local distribution grid.

6. PERSONNEL: Each Party is responsible for all costs of its personnel, including pay and benefits, support, and travel. Each Party is responsible for supervision and management of its personnel.

7. GENERAL PROVISIONS: Work under this MOU will be collectively planned and monitored by the Parties. This MOU is strictly for internal management purposes for each of the Parties. It is not legally enforceable and shall not be construed to create any legal obligation on the part of any Party. This MOU shall not be construed to provide a private right or cause of action for or by any person or entity.

7.1. POINTS OF CONTACT: The following points of contact will be used by the Parties to communicate in the implementation of this MOU. Each Party may change its point of contact upon reasonable notice to the other Parties.

7.1.1. For the Department of Energy - Represented by the Undersecretary, Science and Energy through the Office of Electricity Delivery and Energy Reliability

7.1.2. For the Department of Homeland Security - Represented by the National Protection and Programs Directorate through the Under Secretary

7.1.3. For US Pacific Command - Represented by the Chief of Staff through the Logistics, Engineering, and Security Cooperation Directorate (J4)

7.1.4. For the State of Hawaii – Represented by the Governor through the Department of Business, Economic Development, and Tourism (DBEDT), and the Hawaii State Department of Defense

7.2. CORRESPONDENCE: All correspondence to be sent and notices to be given pursuant to this MOU will be addressed as follows:

7.2.1. For the Department of Energy -

Patricia A. Hoffman
Assistant Secretary for Electricity Delivery and Energy Reliability
Office of Infrastructure Security and Energy Reliability
U.S. Department of Energy
Washington, DC 20585
Patricia.Hoffman@doe.gov

7.2.2. For the Department of Homeland Security -

Christy Riccardi
Regional Director, IX
Office of Infrastructure Protection
National Protection and Programs Directorate
Department of Homeland Security
345 Menlo Park, CA
Christine.Riccardi@hq.dhs.gov

7.2.3. For US Pacific Command -

Brigadier Rory Copinger-Symes
Logistics, Installations, and Security Cooperation Directorate
Chairman, Joint Energy Security Working Group
U.S. Pacific Command
Camp H.M. Smith, HI 96861
copinger-symes.uk@pacom.mil

7.2.4. For the State of Hawaii –

Director, Department of Business, Economic Development and Tourism
P.O. Box 2359
Honolulu, Hawaii 96804
No. 1 Capitol District Building
250 S. Hotel Street
Honolulu, Hawaii 96813
Luis.P.Salaveria@hawaii.gov

The Adjutant General

MG Logan, Director of Emergency Management Agency and Governor's Homeland Security Advisor
State of Hawaii Department of Defense
3949 Diamond Head Road
Honolulu, HI 96816
Arthur.J.Logan.mil@mail.mil

7.3. FUNDS AND MANPOWER: This MOU neither documents nor provides for the exchange of funds or manpower between the Parties nor does it make any commitment of funds or resources. Each Party intends to coordinate its individual funding and resource decisions to maximize the benefits of cooperation under this MOU. Any transfer of funds or sharing of resources between the Parties will be pursuant to a separate or pre-existing agreement.

7.4. MODIFICATION OF MOU: This MOU may only be modified by the written agreement of the Parties, duly signed by their authorized representatives. This MOU will be reviewed annually on or around the anniversary of its effective date, and triennially in its entirety.

7.5. DISPUTES: Any disputes relating to this MOU will, subject to any applicable law, Executive order, directive, or instruction, be resolved by consultation between the Parties or in accordance with DoDI 4000.19.

7.6. TERMINATION OF UNDERSTANDING: This MOU will terminate upon mutual agreement of the Parties that the outcomes outlined in section 4 have been achieved, or by any Party providing ninety days written notice to the others. The MOU may be extended by written agreement of all parties.

7.7. TRANSFERABILITY: This MOU is not transferable except with the written consent of the Parties.

7.8. ENTIRE UNDERSTANDING: It is expressly understood and agreed that this MOU embodies the entire understanding between the Parties regarding the MOU's subject matter.

7.9. EFFECTIVE DATE: This MOU takes effect beginning on the day after the last Party signs.

APPROVED:

FOR THE DEPARTMENT OF ENERGY -

Patricia A. Hoffman
Principal Deputy Assistant Secretary and
Acting Assistant Secretary
Office of Electricity Delivery & Energy Reliability

10/2/17
Date

FOR THE DEPARTMENT OF HOMELAND SECURITY -

Christopher Krebs
Senior Official Performing the Duties of Under Secretary
National Protection and Programs Directorate

10/31/17
Date

FOR THE U.S. PACIFIC COMMAND -

Kevin B. Schneider
Major General
Chief of Staff

7 FEB 2018
Date

FOR THE STATE OF HAWAII -

Luis P. Salaveria
Director
Department of Business, Economic Development, and Tourism

NOV 14 2017
Date

Arthur J. Logan
Major General
Director of Emergency Management Agency and
Governor's Homeland Security Advisor

Nov 23, 2017
Date