Kalaeloa Landowners Summit "Establishing Energy Reliability and Resiliency" Workshop Presented Through a Partnership with the Hawaii Community Development Authority, State of Hawaii Energy Office, United States Department of Energy and Sandia National Laboratories

Staff Report

September 7, 2016

History:

- In 1993, Naval Air Station Barbers Point (NASBP) was identified by the United States Navy (Navy) as one of the military installations to be decommissioned and in 1995 formal discussions began in addition to the environmental documentation required for the decommissioning to occur.

- On July 2, 1999, the NASBP formally closed through the Base Realignment and Closure process. The Navy retained roughly 1,055 acres, identified approximately 457 acres of excess land for transfer to various federal agencies, and designated roughly 2,180 acres of the remaining land as surplus.

- On February 27, 2001, the NASBP Redevelopment Commission, State of Hawaii Department of Transportation and City and County of Honolulu (City) executed a Memorandum of Understanding establishing 176 acres shall be used for roadways throughout the district.

- In 2002, Act 184, Session Laws of Hawaii 2002 of the Hawaii State Legislature (Legislature) transferred redevelopment responsibility from the NASBP Redevelopment Commission to the Hawaii Community Development Authority (HCDA). The Hawaii Revised Statutes §§206E-191 to 196 governs the administration of the Kalaeloa Community Development District (Kalaeloa). The HCDA is designated as the Local Reuse/Redevelopment Authority (LRA) by the Navy and is a body corporate and a public instrumentality of the State of Hawaii.

- In 2006, the HCDA adopted the Kalaeloa Master Plan (KMP) highlighting the need for regional roadway connectivity, 6,800 units, over a million square feet of commercial and light industrial area and the need for all new permanent infrastructure to be upgraded to City standards and conveyed over to the City.

- In 2008, the HCDA conducted its first Kalaeloa Landowners Summit. Over 80 participants comprised of federal, state, county agencies, private landowners, developers, area leaders and stakeholders focused on the planning and development activities, roadways/infrastructure and preservation/recreational activities.

- In 2010, Belt Collins Hawaii Ltd. prepared the draft Kalaeloa Infrastructure Master Plan Update to assess the challenges facing the redevelopment of Kalaeloa and to chart an economically feasible and sustainable course toward implementing the vision of Kalaeloa as *(Wahi Ho'okela)* Center of Excellence.

- In 2012, the HCDA adopted Chapter 215 of Title 15, Hawaii Administrative Rules, for Kalaeloa to carry out concise land development regulations, vision and concepts of the KMP.

Discussion:

- Although NASBP has been closed for over 17 years, to date the utility systems including: water, wastewater, electrical and dry-well drainage systems still remain under Navy ownership. Since the Navy no longer has a mission in Kalaeloa, no federal funding is available to address the deteriorating conditions of the utility systems and there is no funding for replacing the current systems with local standard equipment. On numerous occasions, Navy representatives have asked the HCDA as the LRA to assume the responsibilities for the utilities.

- Since 2006, the HCDA has held numerous meetings with stakeholders to address the existing Navy infrastructure and has secured over $12 million in legislative appropriations to build new facilities to help facilitate the decommissioning of the existing antiquated Navy systems.

- Recently stakeholders have reported more frequent electrical outages and at times the stakeholders are experiencing outages lasting longer than eight hours. Staff discussions with Hawaiian Electric Company, Inc. (HECO) confirms that HECO will not accept the Navy's system due to the dilapidated conditions and concerns about liability.

- HECO is subject to regulation by the PUC. In order for HECO to pursue the necessary improvements it would require substantial time and investment working with the PUC. Given the magnitude of improvements needed establishing a viable rate case and assessment structure would be challenging.

- The 2016 Legislature appropriated an additional $3 million to complete the $7 million Kalaeloa Energy Corridor Project along Enterprise Avenue. In briefing discussions with the legislators, the feedback to the HCDA was to secure public-private partnerships or pursue other creative financing paths for the planning and construction of future infrastructure.

Strategies:

1. The HCDA leverages resources with the State of Hawaii Energy Office (HSEO) and its partner's United States Department of Energy (USDOE) and the Sandia Laboratories (SANDIA) to explore alternative ways to provide firm power in Kalaeloa.

2. The HCDA explore special legislation, agreements and alternatives to providing reliable power for the 3,700 acres, landowners and tenants including establishing Kalaeloa as a special utilities district.

3. Continue to work with and pursue a solution with HECO and the PUC.

Leveraging State/Federal Resources

In late 2015, the DBEDT Director proposed a partnership with the HSEO for a micro-grid in Kalaeloa. Staff have been collaborating w/HECO to further pursue and evaluate this opportunity. We believe this route has tremendous potential that aligns with the State's energy goals while bringing innovative technology to the state.

In an effort to explore potential renewable energy power solutions for Kalaeloa, the HSEO staff is proposing to conduct a micro-grid workshop for Kalaeloa stakeholders.

As described by the USDOE, a micro-grid system is a local energy grid with control capability, which means it can disconnect from the traditional grid and operate autonomously. The grid connects homes, businesses and other buildings to central power sources, which allows the use of appliances, heating/cooling systems and electronics. A micro-grid generally operates while connected to the grid, but importantly, it can break off and operate on its own using local energy generation in times of crisis like storms or power outages, or for other reasons. A micro-grid can be powered by distributed generators, batteries, and/or renewable resources like solar panels. Depending on how it's fueled and how its requirements are managed, a micro-grid might run indefinitely. A micro-grid connects to the grid at a point of common coupling that maintains voltage at the same level as the main grid unless there is some sort of problem on the grid or other reason to disconnect. A switch can separate the micro-grid from the main grid automatically or manually, and it then functions as an island. The Kalaeloa electrical system is like an island. Although the surrounding Ewa and Kapolei newly developed communities have been built to HECO standards, Kalaeloa is caught in a catch-22 where the existing Navy-owned system is substandard and unfunded and in order to redevelop to HECO standards the 2006 KMP estimated cost over $100 million. This Kalaeloa quandary may be ideal for a micro-grid type solution.

The workshop would be presented in partnership with USDOE and SANDIA who receives funding from the USDOE to expand renewable and sustainable energy opportunities

throughout the country. SANDIA is operated and managed by Sandia Corporation, a wholly-owned subsidiary of Lockheed Martin Corporation. Sandia Corporation operates SANDIA as a contractor for the U.S. Department of Energy's National Nuclear Security Administration and supports numerous federal, state, and local government agencies, companies, and organizations.

As a Federally Funded Research and Development Center, SANDIA may perform work for industry responding to certain types of federal government solicitations. Recent examples of SANDIA's partnerships include the Kauai Test Facility and the Kauai Island Utility Cooperative (KIUC) Energy Storage Report. SANDIA performed an assessment of the benefits of energy storage for the KIUC. SANDIA is experienced in working in Hawaii and with military installations across the country.

Partnership:

As an authority approved 2016-2017 budget item, HCDA staff will conduct the 6th Annual Kalaeloa Landowners Summit with the focus on energy reliability and resiliency on Tuesday, October 18, 2016. Consistent with pass Summits, a panel of major landowners will be providing a 15-minute presentation on the status of their perspective projects and activities occurring on their parcels. Each landowner's presentation will also include their current and future energy needs and identify conditions/outages and development challenges as it relates to unreliable energy.

As part of the Summit, HSEO and SANDIA will be conducting the energy reliability and resiliency workshop including Kalaeloa's role in reaching Hawaii's energy goals, an overview of energy assurance and resilience trends. SANDIA will also provide an application example of energy surety redevelopment of the Philadelphia Navy Yard. The afternoon break-out sessions led by SANDIA will focus on redevelopment zones and the potential for the use of an advance micro-grid technology for Kalaeloa.

SANDIA has committed to pay for the cost of the meeting venue and all related equipment charges not to exceed $1,500.00.

As approved by the Authority at its June 6, 2016 meeting, the Kalaeloa Operating Budget for fiscal year 2016-2017 includes funding for a Kalaeloa Landowners Summit. The HCDA received Comptroller's approval to pay for refreshments for the Summit not to exceed $2,500.00 (see Exhibit A).

Projected Outcomes:

- SANDIA's findings will be documented in a subsequent publicly available report that will include the conceptual energy system designs and their rough (+/- 30%) cost estimates.

- These findings may be used by the USDOE, HSEO, HCDA, district landowners and/or other stakeholders to create a potential request for interest or proposal for the development of a Kalaeloa micro-grid system, the nexus for requesting funding for electrical infrastructure improvements, or any other efforts to provide reliable energy for Kalaeloa.

Attachment: Exhibit A – Comptroller's Approval Dated August 15, 2016