

KALAELOA SAFE & RELIABLE ENERGY INFRASTRUCTURE PROJECT

TASK 1 UPDATE

OCTOBER 3, 2018



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A grayscale background image showing a group of people in a meeting. One person in the center is wearing a light-colored button-down shirt with a pen in the pocket. Another person on the left is holding a pencil and pointing at a document. The image is partially covered by a large red rectangle.

INTRODUCTIONS
PROJECT DEVELOPMENT MODELS
SYSTEM STATUS
SYSTEM VALUE
NEXT STEPS

PROJECT TASKS

TASK 1: INFRASTRUCTURE & UTILITY MODEL

1. Identification of Viable Alternatives
2. Assessment of Risks and Opportunities
3. Analysis of Alternatives - Selection of Proposed Approach
4. Evaluation of Transfer of Existing Electrical Infrastructure (EI) from the Navy

TASK 2: ENVIRONMENTAL REVIEW PROCESS

1. Environmental Condition of Property (ECOP)
2. Finding of Suitability to Transfer (FOST)

TASK 3: SOLICITATION DEVELOPMENT

1. Solicitation Plan
2. Existing EI Inventory & Condition Assessment
3. Capital Investment Plan (CIP)
4. HCDA Cost Estimate (CE)
5. Request for Proposals (RFP)

TASK 4: PROPOSAL EVALUATION & DECISION ANALYSIS

1. Technical Evaluation
2. Pricing Analysis
3. Best and Final Offer (BAFO) Discussions
4. Business Case Analysis (BCA)




HCDA'S GOAL: PROVIDE ENERGY
RELIABILITY, SECURITY, AND RESILIENCE FOR THE
KALAELOA COMMUNITY DEVELOPMENT DISTRICT
(KCDD)



PROJECT DEVELOPMENT MODELS

A TWO PART PROJECT:

- ACQUIRE THE NAVY'S ELECTRICAL SYSTEM
- UPGRADE TO ENABLE REDEVELOPMENT

The background image shows a power substation with several tall wooden utility poles supporting multiple cross-arms and insulators. Wires are strung between the poles. In the foreground, there is a chain-link fence. Behind the fence, there are large electrical transformers and other equipment. A sign on the fence in the bottom right corner reads "DANGER HIGH". The entire image is covered with a semi-transparent green overlay.

TASK 1.1

VIABLE ALTERNATIVES

UTILITY PRIVATIZATION

Sale of assets coupled with a corresponding Utility Service Contract to provide electrical service to the area. HCDA acquires the system from the US Navy and sells it to a third party.

OUTSOURCING

Operations & Maintenance (O&M) contract with a Capital Investment Program (CIP) financing element where either operator funds the CIP or HCDA funds at its discretion and availability. HCDA acquires the system from the US Navy and hires a third party to operate.

ENHANCED USE LEASE

A real estate agreement that provides land for infrastructure development that also includes CIP financed via contractor funding. HCDA acquires the system from the US Navy and leases it to a third party.

PUBLIC UTILITY

Rate base option through a regulated electric utility company, with CIP rate surcharge. HCDA acquires the system from the US Navy and sells it to a regulated utility.

ENERGY AS A SERVICE

Comprehensive electrical service, including O&M, utility services, and modernization requirements, through a longer-term contractual arrangement. HCDA acquires the system from the US Navy and sells it to a third party.

UTILITY PRIVATIZATION

- HCDA would acquire system and land from the Navy.
- HCDA would sell the system to a utility.
- HCDA may enter a “Utility Service Contract” with the utility for the Kalaheo district. This contract may include an initial improvements phase, ongoing O&M schedules, and performance standards. The contract may also include generation and smart or micro grid development.
- The customer cost may be either a regulated tariff or a non-regulated fixed-price with economic adjustments; generally the cost of electric service is predictable.
- The utility is responsible for ongoing system improvements including associated financing.
- The utility would be liable for environmental and safety requirements, and any regulatory procedure including relevant State policy goals.
- This is a well-established DoD alternative with a proven record for RFP and contracting.
- This alternative allows the utility to access tax incentives and other company tax benefits.

ENERGY AS A SERVICE

- HCDA would acquire system and land from the Navy.
- HCDA would sell the system to a new owner to provide comprehensive electrical service.
- Comprehensive electrical service would likely include O&M, utility services, and modernization requirements, through a longer-term contractual arrangement. The contract may also include generation options.
- Customer cost (pricing) may be either a regulated cost of service type of model or a fixed-price with economic adjustments. The customer billing may be offered in a \$/ kWh tariff format.
- This is a relatively new concept promoted by the US Air Force. This concept favors a longer term contract.

OUTSOURCING

- *HCDA would acquire system and land from the Navy.*
- *HCDA (owner) would contract for utility services. Utility services include O&M, invoicing and collection, and customer service.*
- *Capital investments may be funded by HCDA or other entity.*
- *HCDA retains ownership of the system, infrastructure, and associated land.*
- *HCDA is liable for any safety or environmental considerations.*
- *HCDA may be subject to PUC regulation, unless it is classified as a Government self-regulated entity.*

ENHANCED USE LEASE

- *HCDA would acquire system and land from the Navy.*
- *HCDA would lease land to a developer in exchange for provision of energy services and potentially lease payment. May include lease of land for development of renewable or other generation sources.*
- *May be incorporated into another viable alternative*
- *HCDA retains ownership of the system, infrastructure, and land.*
- *Potential for renewable energy leadership*
- *This is a system used by the DoD.*
- *HCDA may be subject to PUC regulation, unless it is classified as a Government self-regulated entity.*

PUBLIC UTILITY

Direct engagement with a regulated utility, most likely the Hawaiian Electric Companies (HECO) or the Kauai Island Utility Cooperative (KIUC). The Kalaeloa district system would become part of the HECO or KIUC assets.

HECO

- Privately owned utility, subsidiary of Hawaiian Electric Industries;
- Governed by a board of directors;
- PUC regulated;
- May access more funding, at lower rates, than KIUC, due to scale and American Savings Bank partnership.

KIUC

- Member- owned, not-for-profit generation, transmission and distribution cooperative;
- Governed by a board of nine directors, elected by and from the cooperative's membership;
- PUC regulated;
- May access USDA and Rural Services financing.

The background image shows a power substation with several tall metal pylons supporting high-voltage power lines. In the foreground, there are large electrical transformers and a chain-link fence. A "DANGER HIGH" sign is visible on the fence in the bottom right corner. The entire image is covered with a semi-transparent green filter.

TASK 1.2

ASSESSMENT OF RISKS AND OPPORTUNITIES

Risk Assessment During RFP Review	Utility Privatization	Outsourcing	Enhanced Use Lease	Public Utility Options	Energy As A Service
System Performance	Higher Risk	Higher Risk	Higher Risk	Lower Risk	Higher Risk
Financial Capability	Higher Risk	Higher Risk	Moderate Risk	Moderate Risk	Higher Risk
Environmental & Safety Liability	Lower Risk	Higher Risk	Higher Risk	Lower Risk	Lower Risk
Cost Control	Lower Risk	Lower Risk	Lower Risk	Lower Risk	Lower Risk
Contract Execution Assurance	Lower Risk	Lower Risk	Higher Risk	Lower Risk	Moderate Risk
RISK ASSESSMENT	Does the bidder have strong past performance?	Does the bidder have strong past performance?	Contingent on contract method; it is a new concept.	An existing regulated utility is a known entity.	Does the bidder have strong past performance?

Contract Performance Risk	Utility Privatization	Outsourcing	Enhanced Use Lease	Public Utility Options	Energy As A Service
System Performance	Lower Risk	Moderate Risk	Moderate Risk	Lower Risk	Lower Risk
Financial Capability	Lower Risk	Moderate Risk	Moderate Risk	Lower Risk	Lower Risk
Environmental & Safety Liability	Lower Risk	Higher Risk	Higher Risk	Lower Risk	Lower Risk
Cost Control	Moderate Risk	Higher Risk	Moderate Risk	Moderate Risk	Moderate Risk
Contract Execution Assurance	Moderate Risk	Lower Risk	Higher Risk	Moderate Risk	Moderate Risk
RISK ASSESSMENT	Contingent on the long-term success of the winning bidder.	No opportunity for lump sum purchase payment.	Contingent on contract method; it is a new concept.	Requires direct Navy transfer to a regulated utility.	Contingent on the long-term success of the winning bidder.
OPPORTUNITY ASSESSMENT	Lump sum payment to HCDA.	Direct control over system investment.	Achieve renewable goals faster.	Known utility process.	Large-scale renewable energy.



TASK 1.3

ANALYSIS OF ALTERNATIVES AND SELECTION OF APPROACH

RECOMMENDED APPROACH

Pursue the Request for Proposals (RFP) Process with all five Viable Alternatives. The two most promising alternatives appear to be:

- *Utility Privatization*
- *Energy As A Service*

These would provide HCDA with an opportunity to explore funding for investment in other community-building activities. Final selection of an option and offeror will be made based on evaluation of the proposals.



TASK 1.4

EVALUATION OF THE TRANSFER OF EXISTING ELECTRICAL INFRASTRUCTURE

SPECIAL LEGISLATION

“Gifting” electrical infrastructure assets to the HCDA through special legislation, such as inserted language in the National Defense Authorization Act (NDAA)

FEDERAL UTILITY PRIVATIZATION

Sale of electric infrastructure assets associated with/without a corresponding Utility Service Contract in accordance with 10 USC 2688 legislation

INTER-GOVERNMENTAL SUPPORT AGREEMENT

Inclusion of electrical infrastructure asset transfer in an IGSA between the US Navy and the HCDA; the IGSA may include a Utility Service Contract to provide power delivery to US Navy facilities/housing



SYSTEM STATUS

NAVY ASSETS

ENERGY INROADS

EXISTING SYSTEM

NAVY'S ASSETS

~21 miles of active & inactive underground conductor

~25 miles of active & inactive overhead conductor

3 substations

315 transformers

575 service lines

24 MW load (22 MW used, 2 MW line loss)

Average energy availability of 99.5%, per Sandia Labs

PROJECT
LOCATION

LEGEND

- FORMER HAS BARBERS POINT PROPERTY BOUNDARY LINE
- POINT OF INTEREST (POI) SITE
- ELECTRICAL
- OVERHEAD CIRCUIT, 48 KV & 11.5 KV
- OVERHEAD CIRCUIT, 11.5 KV
- OVERHEAD CIRCUIT, 480 V
- OVERHEAD CIRCUIT, SECONDARY
- UNDERGROUND CIRCUITS, PRIMARY
- UNDERGROUND CIRCUITS, PRIMARY 11.5 KV & 480 V
- UNDERGROUND CIRCUIT, SECONDARY
- FUSE CUTOFF
- AIR SWITCH, POLE MOUNTED
- UTILITY POLE WITH NUMBER
- TRANSFORMER WITH SIZE, POLE MOUNTED
- TRANSFORMER WITH SIZE, SUBSTATION OR PAD-MOUNTED
- POTHEAD/TERMINATION
- MANHOLE WITH NUMBER
- HANDHOLE
- GUY POLE
- DISCONNECT SWITCH, POLE MOUNTED
- GROUP OPERATED AIR SWITCH, POLE MOUNTED
- NORMALLY OPEN
- NORMALLY CLOSED
- STREET LIGHT
- SEWER

RETENTION AREA
(NOTE: RETENTION AREA BOUNDARIES MAY NOT BE ACCURATE)

NOTES

- The accuracy of this document is limited to the quality and scale of the source information. This document is not a legal representation of an engineered survey.

SOURCE

Barbers Point FOM - Barbers Point, 2008
Navy Electrical Key Maps



EXISTING SYSTEM

SYSTEM IMPROVEMENTS AS OF 2018



SYSTEM VALUE

ESTIMATING COSTS

703

BARBERS POINT



Photo Credit: <https://www.flickr.com/photos/jafer24/>

COST ESTIMATES

OPTION: REPAIR AS NEEDED

- \$45M
- 2 existing voltage levels are not compatible with HECO standards
- The existing lower voltage lines would be replaced in entirety
- The existing higher voltage lines can be upgraded and reused, with new transformers

OPTION: REPLACE IN KIND

- \$105M
- Underground and overhead wires replaced in same places, transformers replaced, etc.

OPTION: PLACE SYSTEM UNDERGROUND

- \$243M
- Move all overhead underground and floodproof
- Also contains replacement of transformers

COST ANALYSIS

OPTION: REPAIR AS NEEDED

- \$45M
- Lowest up front cost
- System capacity not expanded
- Long-term reliability lesser than other options

OPTION: REPLACE IN KIND

- \$105M
- Middle ground of cost
- Overhead remains, thereby risk of storm damage and other pole knockdown potential remains

OPTION: PLACE SYSTEM UNDERGROUND

- \$243M
- Highest up-front cost
- Reliability and aesthetic value above other two options

NEXT STEPS

TASK 2: ENVIRONMENTAL REVIEW PROCESS
ONGOING

TASK 3: SOLICITATION DEVELOPMENT
NOTICE TO PROCEED ANTICIPATED
AFTER THIS BOARD MEETING

TASK 4: PROPOSAL EVALUATION & DECISION ANALYSIS
ANTICIPATED IN 2019



TIMELINE

Task	2018 Q3	2018 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4
1.0 Infrastructure & Utility Model	X					
2.0 Environmental Review Process	X	X				
3.0 Solicitation Development		X	X			
4.0 Proposal Eval. & Decision Analysis				X	X	
Award						X



QUESTIONS?



THANK YOU

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