

**SPECIAL MEETING OF THE BOARD OF DIRECTORS  
KAUAI ISLAND UTILITY COOPERATIVE**

Held via Conference Call

On December 11, 2020

**MINUTES**

**Call to order at 1:39 pm.**

**1. Roll Call**

- 1.1 **Directors Present via Conference Call:** Directors Allan Smith (Chair), Jan TenBruggencate (Vice Chair,), Dee Crowell, David Iha, Janet Kass, James Mayfield, Calvin Murashige (Secretary), Teofilo Tacbian, and Peter Yukimura (Treasurer); and David Bissell (President and CEO). A quorum of directors were present.
- 1.2 **In attendance:** Laurel Loo (General Counsel), Brad Rockwell (COO), Beth Tokioka (Communications Mgr.), Chris Yuh (Finance Manager) and Nadine Tipps (Executive Administrator); Members of the press (0) and Members of the public (1).

**2. Approval of Agenda –**

- 2.1 The agenda was approved as circulated.

**3. Public Testimony – None.**

**4. New Business -**

**4.1 West Kauai Energy Project**

- 4.2 CEO Bissell and Brad Rockwell circulated and discussed the attached presentation, along with Resolution 09-20.
- 4.3 The Board is meeting to discuss and, potentially vote on, modifications to the West Kauai Energy Project, a pumped storage and hydro project located in Mana, Kauai. Certain financial, contractual and construction changes relating to the project were discussed.
- 4.4 Questions were asked and answered.
- 4.5 Discussion ensued.
- 4.6 It was stated that the presentation only reflects the last few years, but there has been discussion on this project for a long time. CEO Bissell stated that we have assessed all of the resources on the island for over a decade.
- 4.7 It was stated that there are a lot of benefits to the Native Hawaiian community. This will be a great benefit in the long run.

At 2:12 p.m., with a motion by Chair Smith and a second by Director Murashige, the meeting was moved into Executive Session so the Board could discuss contractual and financial aspects of the Project.


At 2:42 p.m., with a motion by Director TenBruggencate and a second by Director Murashige, the meeting was moved back into Regular Session.

4.8 Director TenBruggencate moved to approve Resolution 09-20; Peter Yukimura seconded the motion. All Directors present voted in favor of the motion and it was unanimously approved.

IN FAVOR:	Crowell, Iha, Kass, Mayfield, Murashige, Smith, Tadbian, TenBruggencate & Yukimura	Total – 9
OPPOSED:	None	Total – 0
EXCUSED:	None	Total – 0

5. **Adjournment.**

5.1 The meeting was adjourned by unanimous consent at 2:47 p.m.



---

Calvin Murashige  
Secretary



# WEST KAUAI ENERGY PROJECT

Board of Directors Meeting  
December 11, 2020

## West Kauai Energy Project Background

- October 2018- KIUC announces design, engineering and construction services agreement with McMillian Jacobs Associates, following a comprehensive Request for Proposal (RFP) process which began in November 2017
- Phased approach
  - Four phases – 3 engineering phases and construction
  - Commencement of each phase subject to KIUC Board approval
- 60% engineering (phase 2) anticipated to be completed in 2019

## EPC Contract Progress Nov 2018 – Nov 2019

- Proceeded through Phase 1 and 2 design (60% engineering)
- Determined that BESS was necessary to handle solar PV variability and limit wear & tear on pumps
- Capital cost constraints were trending design toward less hydro output with shorter-duration storage; basically, an inefficient solar + storage project
- Reviewed possible alternatives
  - KIUC Direct Procurement of Major Equipment
  - Removal of Solar PV and BESS scope
  - Removal of upper section (GENCO)
  - Reducing capacity of reservoirs

## Feb 2020 Meeting at McMillen HQ

- Discussion of alternative structure and project configurations
- Recognized the need to maximize hydro production while providing long-duration storage (two things that set this apart from solar PV + BESS)
- Determined that larger solar PV could offset increased reservoir costs, thereby keeping LCOE reasonable

## Independent Power Producer (IPP)

- Capital cost of project became too large for KIUC's Balance Sheet
- Approached IPP to gauge interest
  - Large company with strong balance sheet
  - Significant Hydropower, Solar + BESS, development and operating experience
  - Proven capability regarding Tax Equity structures
- Conducted project site visits- March 2020
- Term sheet signed- April 2020
- Continued project design refinement and costing through fall of 2020

## West Kauai Energy Project Overview

- Solar and Battery Storage
  - 56 MWdc / 35 MWh solar with 35 MW / 70 MWh storage
- Pumped Storage Hydropower
  - 35 MW pumping and 20 MW turbine generator (Mana)
  - 100 MG Puu Opae and 80 MG Mana reservoirs will provide 12 hours energy storage
- Hydropower Only
  - 4 MW turbine generator (Puu Opae)
  - 179 MG Puu Lua reservoir adds significant "catch and release" storage capability
  - Water will also run through lower generator effectively doubling output
- Annual energy to grid projected at 110,000 MWh

## Cost of Energy

- PPA provides for fixed payments– effective rate ultimately based on output to grid, which will vary somewhat with weather and dispatch
- State Tax Credit eligibility reduces project cost by 6%
- Substation construction will be by developer and will be included in PPA rate
- Overall project is forecast to reduce rates by \$183 million over first 25 years when compared to using conventional generation with forecast oil price increases

## Rate Sensitivity of Oil and PPA Pricing

	Oil \$30/bbl	Oil \$40/bbl	Oil \$50/bbl	Oil \$60/bbl	Oil \$70/bbl	Oil \$80/bbl	Oil \$90/bbl	Oil \$100/bbl
No Project	\$ 0.312	\$ 0.321	\$ 0.331	\$ 0.340	\$ 0.350	\$ 0.359	\$ 0.369	\$ 0.378
PPA \$100/MWh	\$ 0.314	\$ 0.318	\$ 0.323	\$ 0.327	\$ 0.331	\$ 0.336	\$ 0.340	\$ 0.344
PPA \$125/MWh	\$ 0.320	\$ 0.325	\$ 0.329	\$ 0.333	\$ 0.338	\$ 0.342	\$ 0.346	\$ 0.351
PPA \$150/MWh	\$ 0.327	\$ 0.331	\$ 0.335	\$ 0.340	\$ 0.344	\$ 0.348	\$ 0.353	\$ 0.357
PPA \$175/MWh	\$ 0.333	\$ 0.337	\$ 0.342	\$ 0.346	\$ 0.350	\$ 0.355	\$ 0.359	\$ 0.363
PPA \$200/MWh	\$ 0.339	\$ 0.344	\$ 0.348	\$ 0.352	\$ 0.356	\$ 0.361	\$ 0.365	\$ 0.369

- Rates relatively stable at current & futures prices, with or without WKEP and even at any PPA price
- Rates are most sensitive with no project and high oil prices

- <https://www.cmegroup.com/trading/energy/crude-oil/light-sweet-crude.html>
- <https://www.eia.gov/outlooks/steo/>

## Development Agreement

- Reimbursement of KIUC development costs
- Initial payment at execution, followed by milestone payments through commercial operations date
- KIUC could retain the option to buy the development rights back but... ITC requires completion of construction by end of 2023

## “Enhanced” Environmental Assessment Nearly Complete

- Stream Studies and Habitat Assessment
- Puu Lua Reservoir Survey and Assessment
- Cultural Impact Statement
- Archaeological Literature Review and Field Inspection
- Flora and Fauna Survey
- Socio-Economic Survey
- Hydrology analyses
- Geotechnical surveys
- Solar data collection

## Timeline to COD

- Rest of 2020: Execute documents and file HPUC application; finalize draft EA
- Early 2021: Community update, EA public comments
- Late 2021: HPUC approval; permitting and site control
- 2022: Procurement of major equipment and begin construction
- December 31, 2023: Federal ITC deadline for completion of construction of solar and BESS, plus PSH

## Benefits of WKEP

- 85% RPS and reduced GHG
  - Project will be 20%-25% of RPS
- Rate stabilization
- Bulk storage resource
- Increase renewable diversity
  - Generates when solar isn't available
- Increased system reliability and better ability to island west side
- Reduced KPS generation, turbine generator operation
- Community benefits, specifically for DLNR, DHHL, ADC / KAA but also for recreational users of Kokee
- Jobs, particularly during construction



## Risks

- Federal ITC completion of construction deadline of December 31, 2023
- Tax incentives become more/less favorable due to change in law
- Costs become too high and PPA is not viable
- Cultural and/or environmental difficulties
- Site control (DLNR, DHHL, and ADC/KAA)
- Lingering, low oil prices reduce projects economic benefits

## Current Status & Next Steps

- Board approval of current terms
  - PPA with substation to be constructed by IPP
  - KIUC responsible for Overhead Line extension
- Finalize and execute PPA, IA, and Development Agreements
- Complete and file PUC Application
- Board Action Item:
  - Board to consider approval to proceed with finalizing documents and authorize CEO to execute necessary documents to effectuate transaction and file application for approval with PUC

# DISCUSSION

---