



Beneficiary Consultation Meeting

KIUC's Proposal to Develop a Pumped-Storage Hydroelectric Project at Waimea, Kaua'i

**Kekaha Elementary School
Tuesday, June 13, 2017
6:00 to 8:00 p.m.**

**Kapa'a Elementary School
Wednesday, June 14, 2017
6:00 to 8:00 p.m.**

Agenda

I. PURPOSE OF BENEFICIARY CONSULTATION

- Present Background Information
- KIUC will Present their Proposed Project
- Answer Questions
- Beneficiary Comments

II. DHHL INTRODUCTION AND BACKGROUND INFORMATION

- How to Submit Comments
- DHHL Lands and Plans
- Mediation Agreement for the Waimea Watershed Area

III. KIUC PRESENTATION

IV. NEXT STEPS

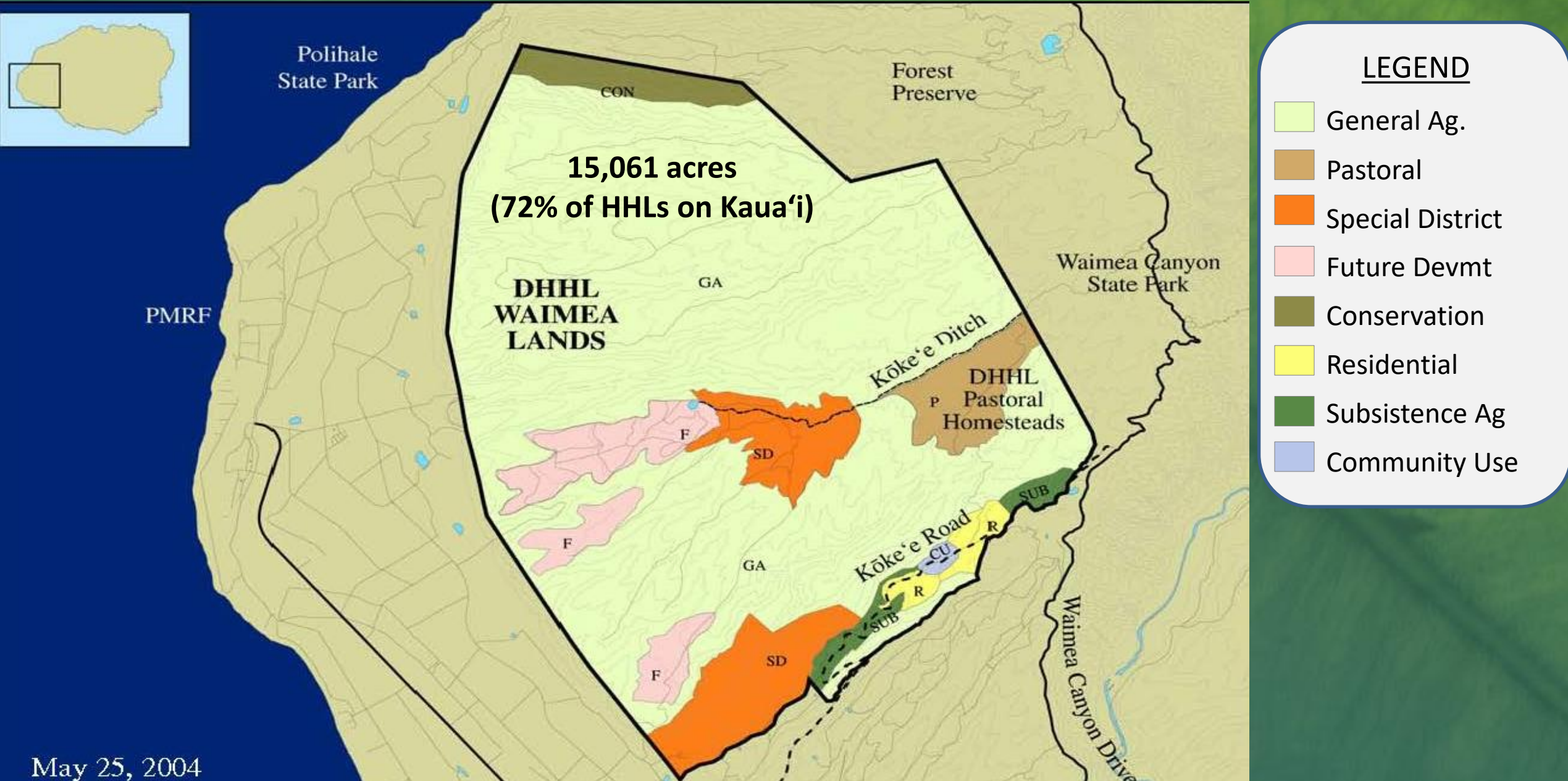
V. CLARIFYING QUESTIONS/ANSWERS

VI. BENEFICIARY COMMENTS

How to Submit Comments

1. You can present your comments tonight:
 - Sign-in at the registration table, listen for your name and be ready to speak.
 - Each speaker has 3 minutes to share their mana'o
 - State your name and let us know if you are a lessee, applicant or if you are not a DHHL Beneficiary.
 - Please indicate whether you support the project, support the project with reservations, or don't support the project
2. You can write your concerns down on the half-sheet blank and turn it into the staff at the registration table.
3. You can think about it and submit written comments later— deadline for comments is July 14, 2017. Written comments can be:
 - Emailed to the Planning Office at: DHHL.Planning@hawaii.gov
 - Mailed to: DHHL Planning Office, P.O. Box 1879, Honolulu, HI 96805

Kaua'i Island Plan, 2004



Pu'u 'Ōpae

The Kaua'i Island Plan designates the Pu'u 'Ōpae area as "Special District" which indicates the presence of a number of unusual opportunities and/or constraints that require more detailed planning.



Management of water resources and roads to access these remote lands are vital to utilizing the lands for homesteading purposes.

West Kaua'i Regional Plan 2011

Beneficiaries identified 5 Priority Projects in West Kaua'i.

The Proposed Hydro Project helps to implement 2 of the 5 Priority Projects:

1. Develop an Agricultural and Water Plan

- Pu'u 'Ōpae reservoir should be maintained and the irrigation system rehabilitated.
- An agricultural master plan should be developed.

2. Develop Renewable Energy Projects Compatible with Agriculture

The community agreed on development guidelines for the Waimea parcel:

- Renewable energy is generally a good idea.
- Large amounts of homestead land should not be given exclusively to any one entity.
- Any license or general lease agreement for renewable energy development should be structured to preserve or support agricultural and cultural activities along with the development of renewable energy systems.
- Land Use Designations in the Kaua'i Island Plan should be maintained
- Any agreement for the use of lands should negotiate direct benefits, beyond simple rent income, to DHHL and the beneficiary community.

The community indicated a willingness to support projects that meet these goals.

Documents & Event Chronology

Year	Event
2004	DHHL Kaua'i Island Plan Adopted
2011	DHHL West Kaua'i Regional Plan Adopted
2013	HHC Authorizes seeking Waimea River Water Reservation
2014	HHC Water Policy Plan Approved
2015	Reservation Petition for Waimea River Submitted
2017	Mediation Agreement Passed Modified Reservation Submitted

Origins of Mediated Settlement

- **Po'ai Wai Ola and West Kaua'i Watershed Alliance IIFS Petition & Waste Complaint**
- **DHHL Water Reservation Petition for 33 mgd**
- **Both filed to Water Commission**
- **CWRM asked parties to mediate**
 - **Po'ai Wai Ola**
 - **ADC**
 - **KAA**
 - **DHHL**
 - **KIUC**

What are Interim Instream Flow Standards?

- The minimum a stream needs to protect Public Trust Uses
- Most streams in the state: IIFS is 1987 Status Quo (DRY)
- Only new IIFS have been set through litigation
 - Waiāhole
 - Nā Wai 'Ehā
 - East Maui
- Most took decades to settle

DHHL Water Policy Plan

- HHC & DHHL guide for managing water kuleana
- Developed after two years of consultation
- Four priority goals
 1. Communication
 2. Advocacy
 3. Water Assets Inventory
 4. Watershed protection
- Specific goal to seek reservations of water

What are Water Reservations?

- Waters set aside by CWRM and/or BLNR for future use by DHHL
- Done so far for groundwater on
 - O'ahu
 - Moloka'i
 - Keauhou (Kona, Hawai'i Island)
- Designated vs. non-Designated areas

Granting of Water Reservations

- DHHL bases reservation petitions on:
 - Island Plans
 - Regional Plans
 - Short and long term needs
 - Established water duties where available
 - Best research where no approved duties available
 - Knowledge of the area
- CWRM can accept, reject, or modify
- CWRM to consider June 20, 2017

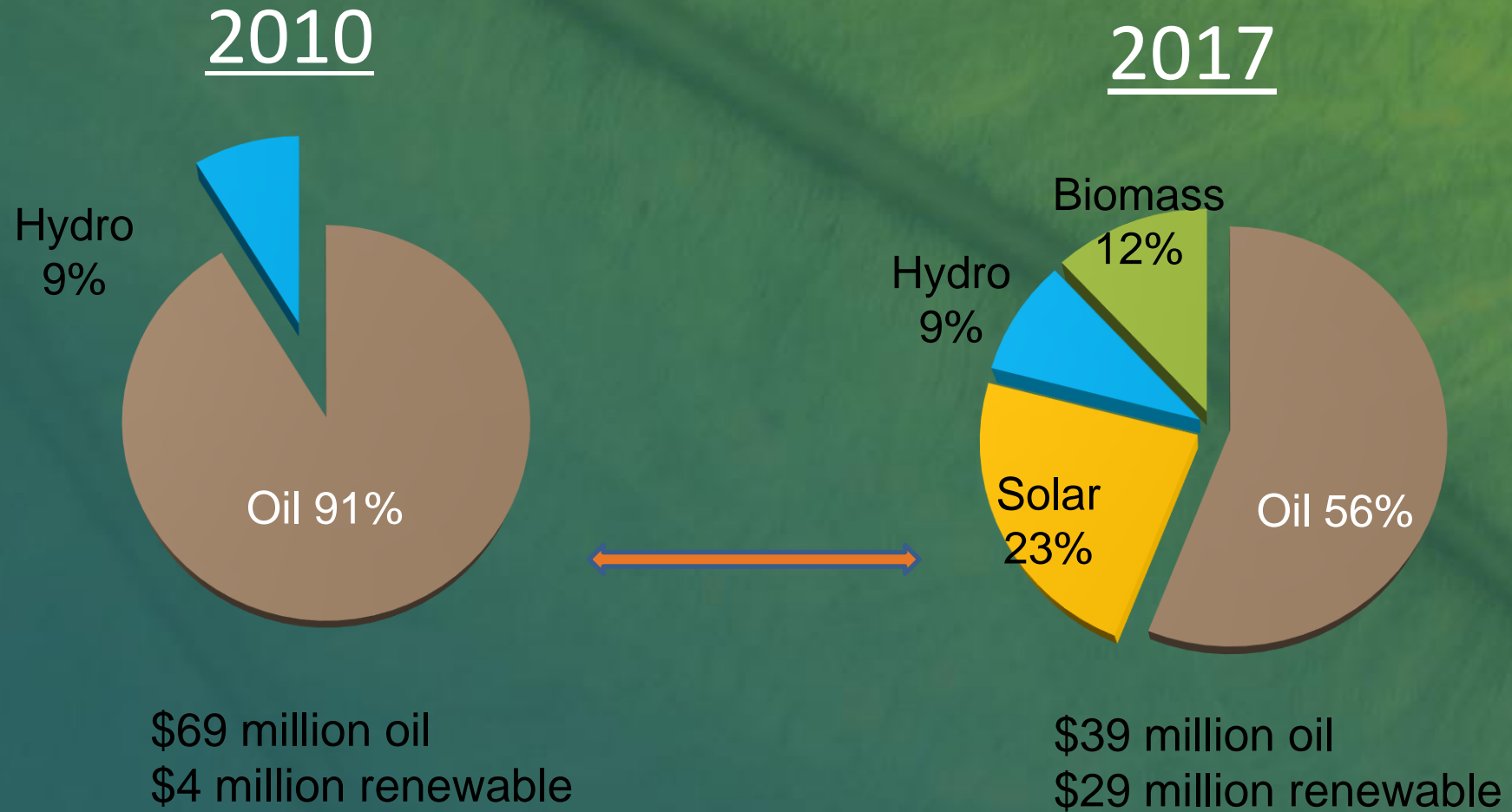
Mediation Agreement for the Waimea Watershed Area

- **Approved April 18, 2017**
- **Set fundamental principles**
- **Set a non-litigated IIFS / modified diversions**
- **Monitoring**
- **Water for actual ADC / KAA uses**
- **Consideration of a modified DHHL reservation petition**
- **Possible renewable energy on DHHL lands**
- **Timeframe for KIUC to secure all land commitments**
 - **Beneficiary consultation needs explicitly considered**
- **Retirement or rebuild Waiawa hydro**

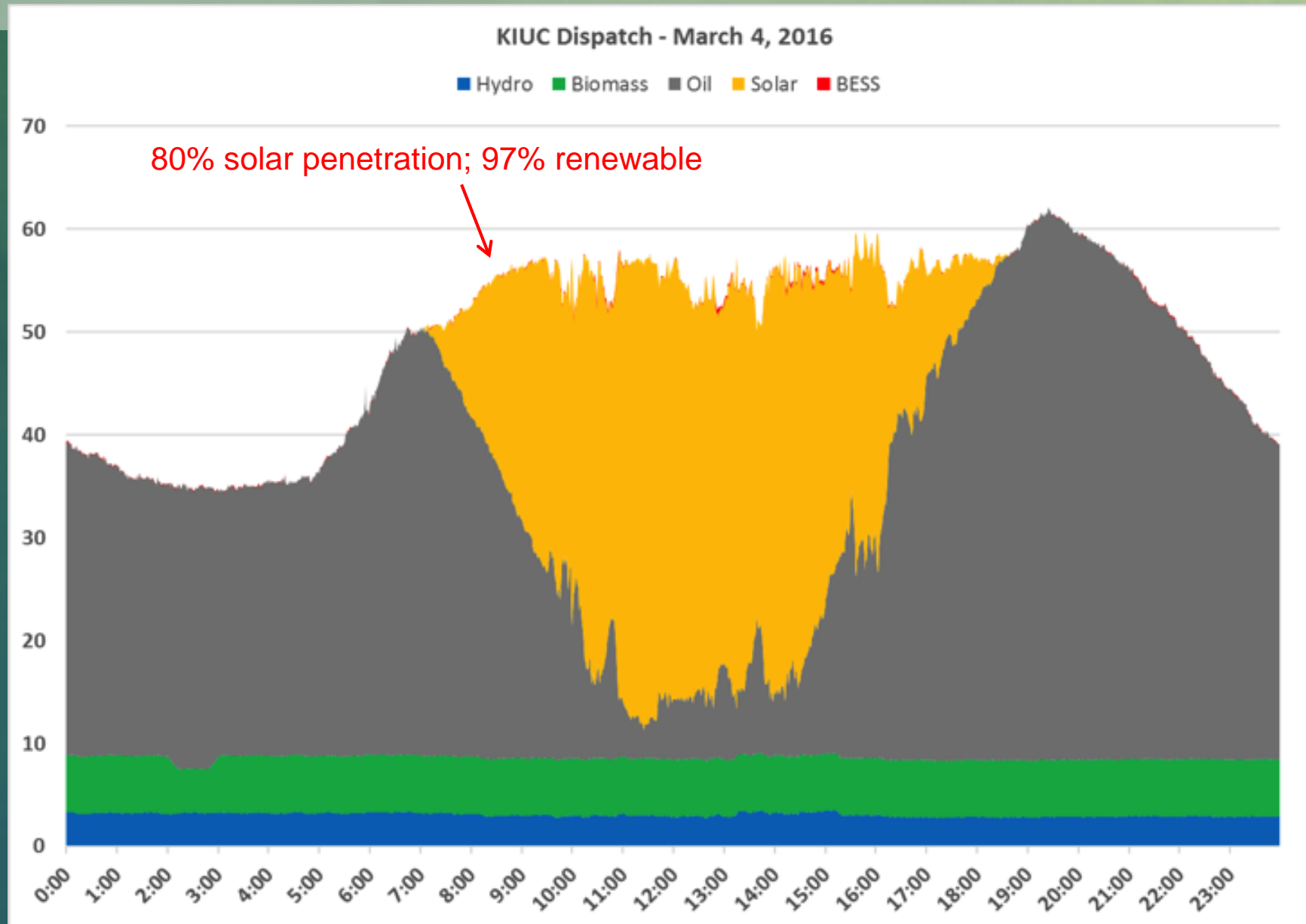
Mediation Agreement

- Unprecedented settlement of complicated issues
- Immediate water in streams
- Two years (not ten or twenty)
- DHHL reserved its rights to petition for full long term water needs
- If granted, first surface water reservation for DHHL
- CWRM sees it as a possible model for other disputes
- Not yet fully implemented!

Kaua'i's Energy Mix



Kaua'i's Daily Energy Supply

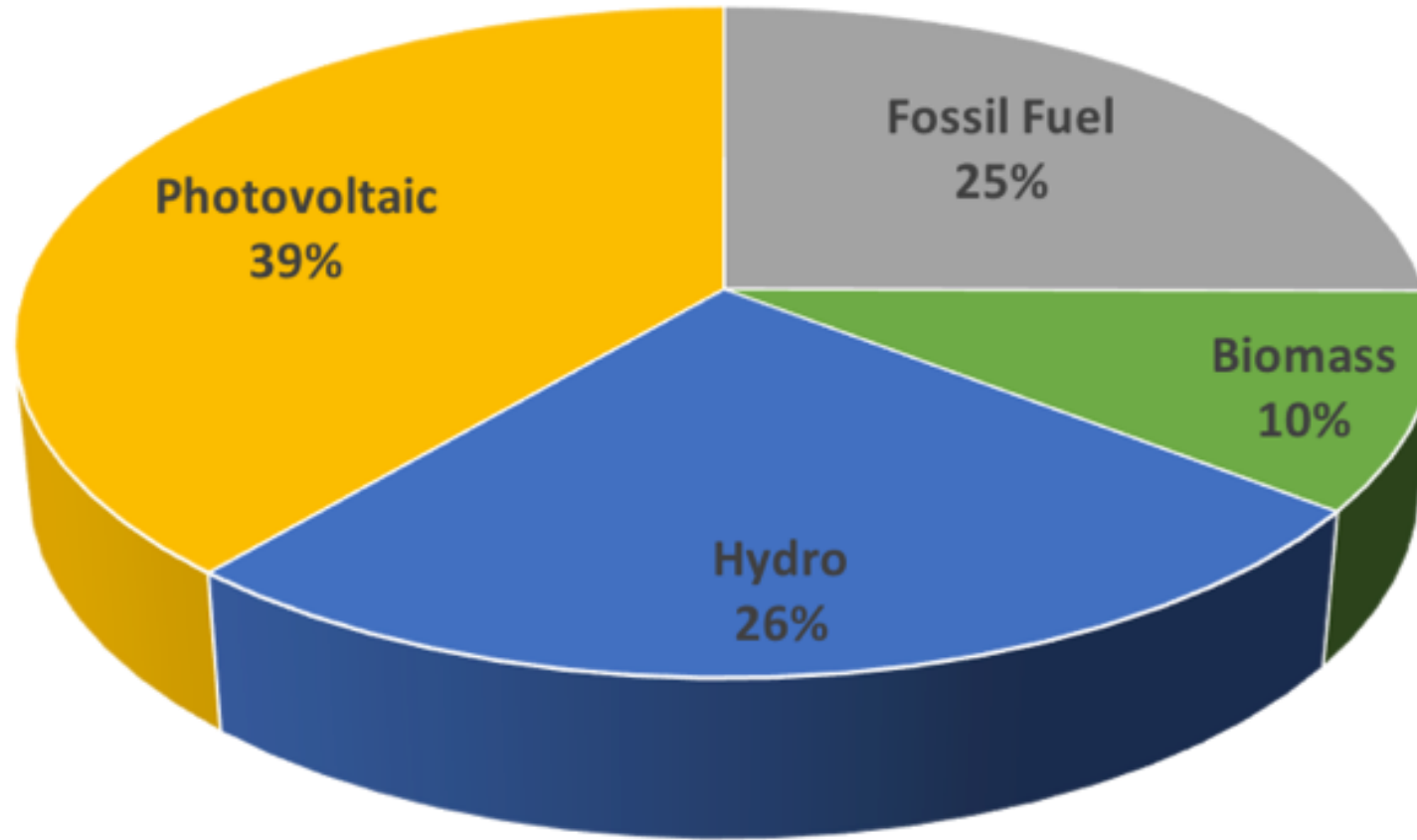


Kaua'i's Solar Challenge

- Most of Kaua'i's daytime demand for electricity will soon be met with solar
- The challenge is moving cheap solar power to evening peak hours
- Pumped storage provides a way to store solar energy and release energy when it's most needed



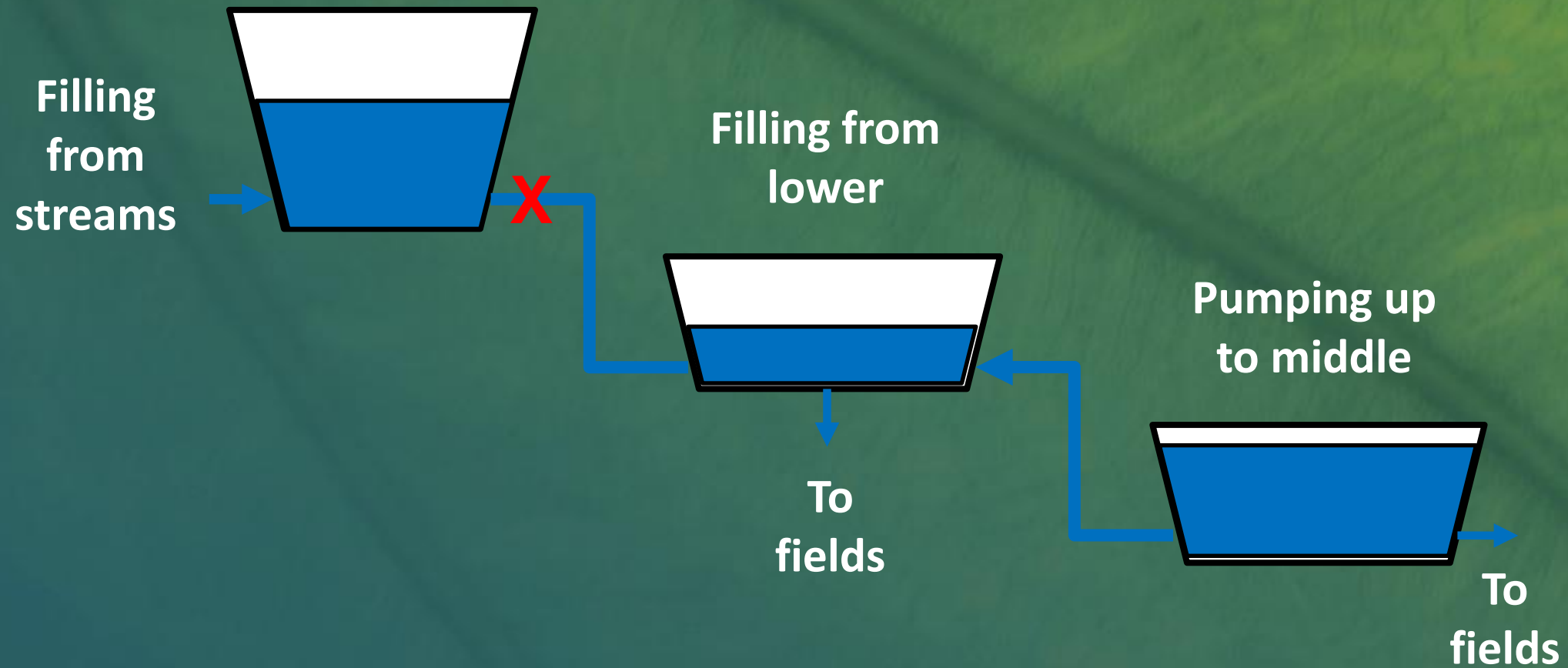
Renewable Energy Outlook for 2023



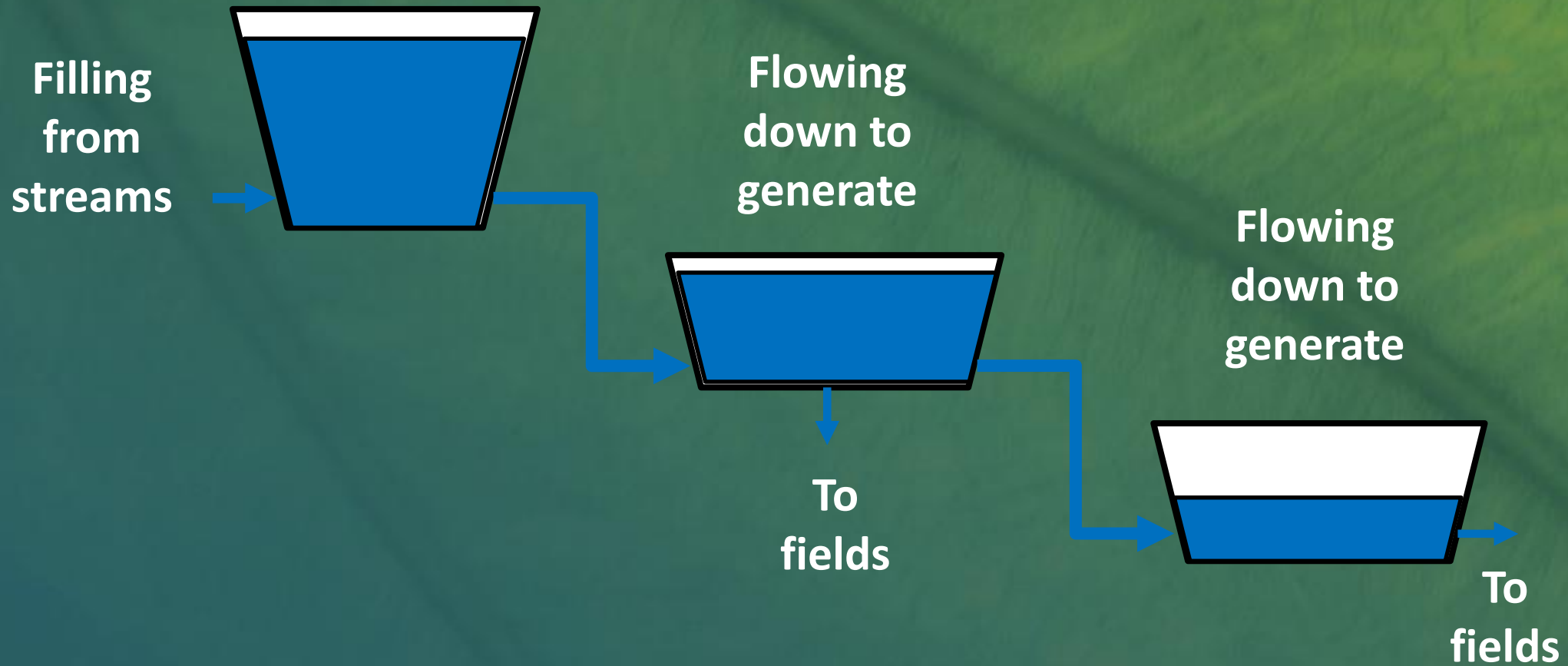
Integrated Energy Project Proposal

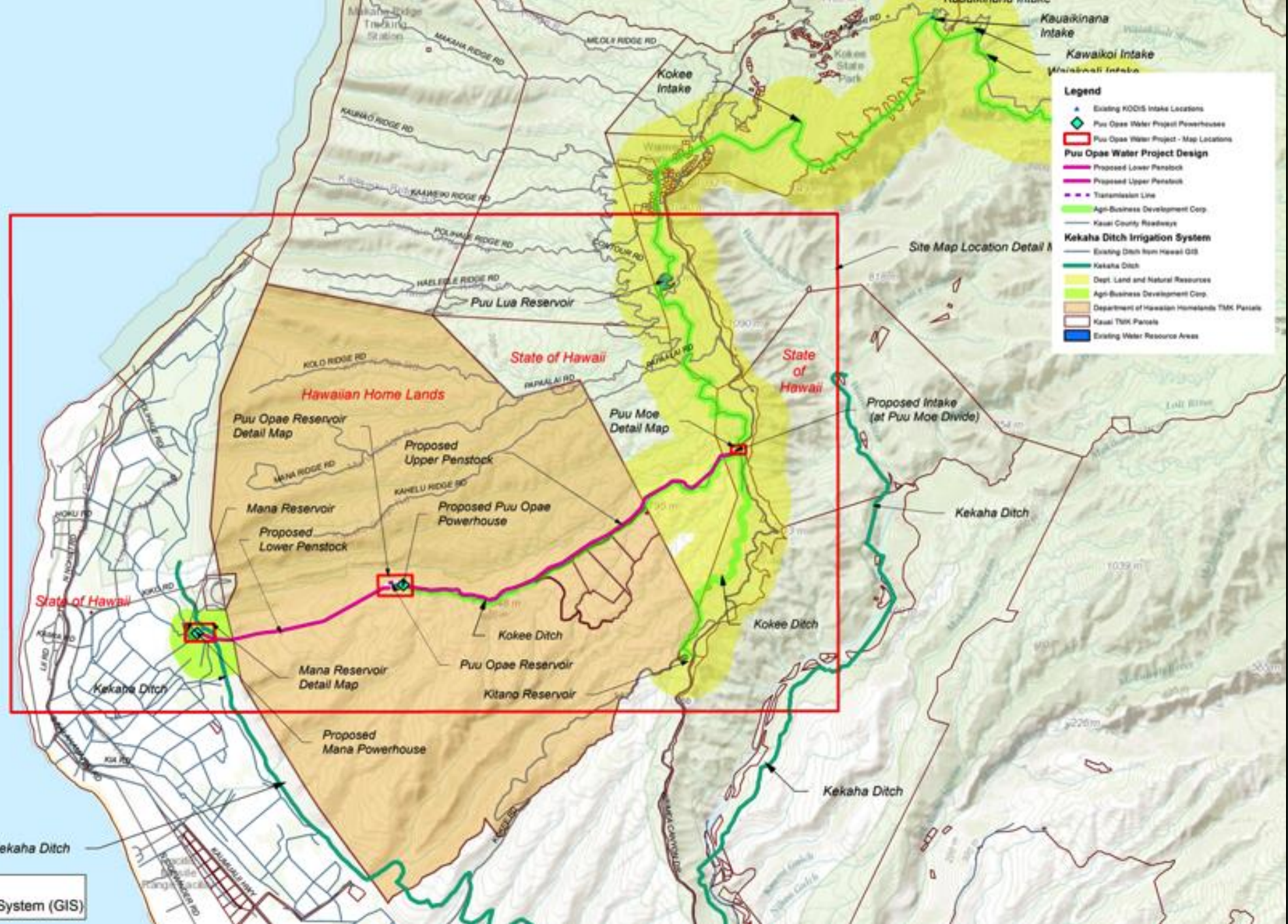
- **Renewable energy resource for island of Kauaʻi**
 - Up to 25 MW of pumped storage hydro
 - Store and release hydro
 - New PV capacity
- **Irrigation water delivered through ditch and project pipeline to DHHL lands and ADC/KAA**
- **Primary project components**
 - Kokeʻe ditch repairs and upgrades
 - Rehabilitation of Puʻu Lua, Puʻu ʻŌpae, and Mānā reservoirs
 - Two new sections of buried pipeline
 - Two new powerhouses
- **KIUC operates and maintains the Kokeʻe Ditch system and Puʻu Lua, Puʻu ʻŌpae, and Mānā Reservoirs**

How Does the Project Work?



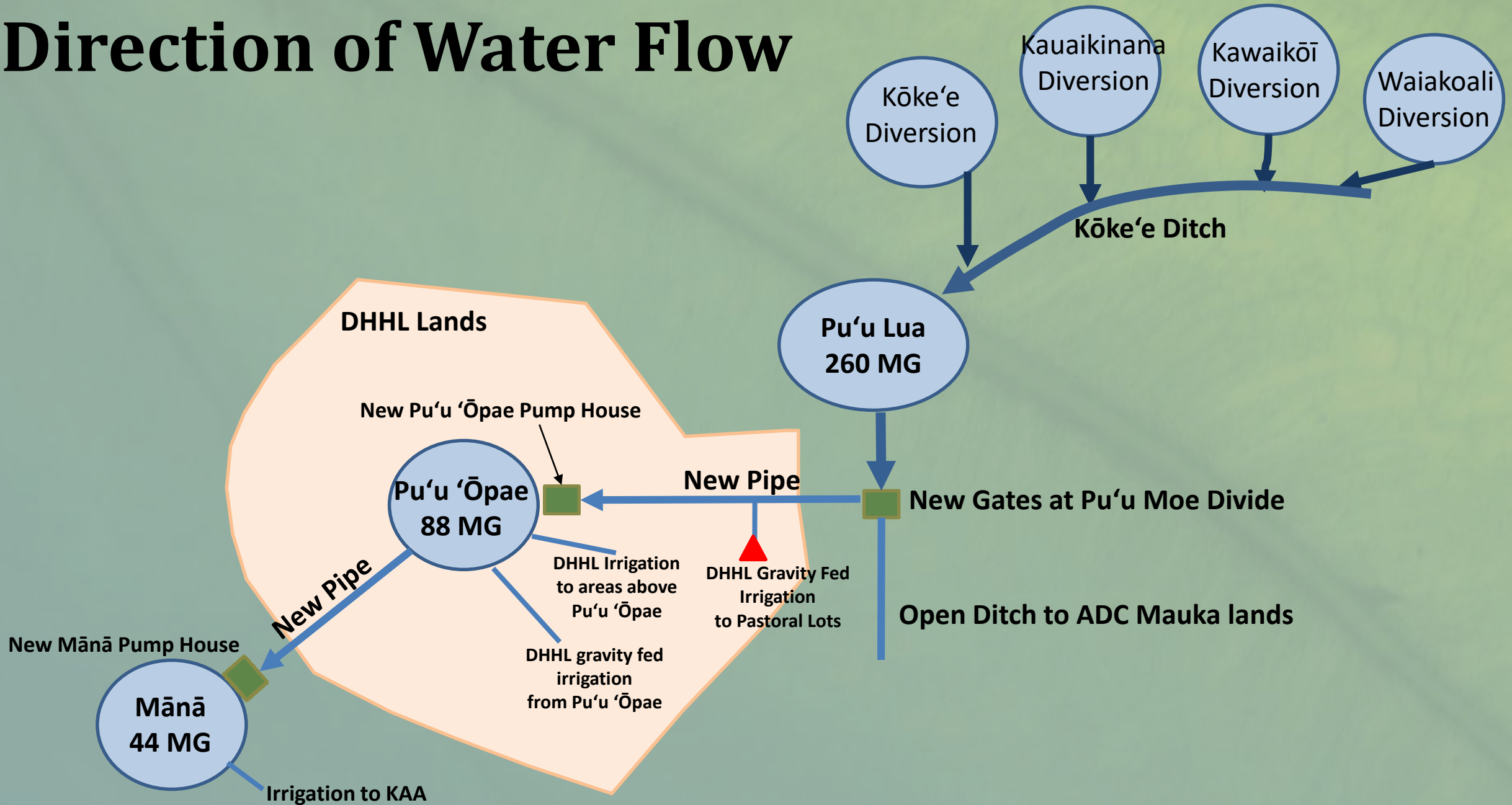
How Does the Project Work?





Source:
Hawaii Geographic Information System (GIS)

Direction of Water Flow



Pu'u Lua Reservoir - Current



Pu'u Lua Reservoir after Rehabilitation

Pu'u 'Ōpae Reservoir - Current



Pu'u 'Ōpae Reservoir – During Sugar Operations



Mānā Reservoir – During Sugar Operations



Pictures of Waimea Resources



Pu'u Lua source of water



Pu'u 'Ōpae Reservoir water storage site



Drop from Pu'u 'Ōpae to Mānā plain.



Ditch repair and monitoring



Pu'u 'Ōpae Reservoir repair



Improved road access & waterline repairs

DHHL Benefits

- Delivery of water to DHHL mauka lands
- Rehabilitation and maintenance of Pu'u 'Ōpae Reservoir
- Road improvements and maintenance
- Electrical power at Pu'u 'Ōpae
- Rehabilitation and maintenance of Pu'u Lua Reservoir
- Repairs/upgrades and maintenance and operation of Kōke'e ditch
- Enabling DHHL and beneficiaries to utilize lands around Pu'u 'Ōpae
- In-kind value of approximately \$10 million capital investment and \$135,000 annually

DHHL Benefits Not Related to Energy Project

- **Added benefits based on an understanding of DHHL needs**
- **Upper road improvements and maintenance**
- **Water delivery and storage for pastoral lots**
- **In kind value of approximately \$875,000 capital investment and \$15,000 annually**

How This Project Has Changed

- **Differences from the 2012 Hydro Project Proposal**
 - Added pumped storage and store and release components
 - Reduction water
 - Increase in infrastructure costs/benefits
- **Market Changes**
 - Reduction in solar and storage pricing
 - Rapid changes in battery technology and pricing
- **What Role Does the New Project Proposal Play in KIUC Generation Portfolio?**
 - Solar generation component for pumping
 - Ancillary services not base load power
 - Dispatchable energy vs. intermittent energy
 - Grid stability and reliability

Community & Agricultural Benefits

- Water is returned to streams
- Rehabilitation and long term maintenance of reservoirs and Kōke'e ditch system
- Support for agriculture and food sustainability on west side
- Jobs through construction of Project
- Enables DHHL to utilize Pu'u 'Ōpae mauka lands - water, roads and power
- Improvement and maintenance of access roads – including to Pu'u Lua Reservoir
- Fire suppression support

KIUC Benefits

- Member-owned legacy project that will store and generate power cost effectively and reliably
- Makes a significant contribution towards 100% renewable energy goal
- Supports more solar generation
- Provides diversity in portfolio
- Increased electrical grid system stability and reliability

Waimea River Mediation Agreement

- **Petition filed by Earth Justice on behalf of Po'ai Wai Ola and West Kaua'i Watershed Alliance**
 - Amend interim instream flows
 - Complaint filed against ADC and KAA for alleged waste of water on ditch systems
- **Parties –Po'ai Wai Ola and West Kaua'i Watershed Alliance/Earth Justice, ADC, KAA, DHHL, and KIUC**
- **Mediation Settlement approved by Water Commission on April 18, 2017**
- **Unprecedented resolution of a water dispute in Hawai'i**

Mediation Agreement Points

- More water for streams and Waimea River
 - Required instream flow releases
 - Modifications to diversions
- Installation of monitoring equipment and stream flow data collection
- Water for DHHL lands
- Water for KIUC project
- Reduced water for Waimea Mauka hydro
- Waiawa hydro will either be retired or rebuilt with reduced capacity (less water)
- Timeline with required action items

Project Timeline

	2 nd Half 2017		2018	2019	2020	2021	2022	2023
Land Agreements								
Engineering Studies								
Studies Permitting								
Construction Commissioning								

Next Steps

1. The 30-day comment period is now open; comments are due by July 14, 2017
2. DHHL is still in negotiations with KIUC on the specific terms of the agreement.
3. As required by law, DHHL has scheduled 2 public hearings on this project. Both Public Hearings have been scheduled for Wednesday, July 12, 2017:

9:00 a.m. to Noon	6:00 p.m. to 8:00 p.m.
Kaua'i State Office Building	King Kaumuali'i Elementary School, Cafe
Conference Rooms A and B	4380 Hanamā'ulu Rd., Līhu'e
3060 'Eiwa Street, 2nd Floor, Līhu'e	
4. Staff will prepare the Beneficiary Consultation report and will present it to the HHC at its Kaua'i meeting (August 21-22, 2017)
5. At this time, a specific date for the Hawaiian Homes Commission to make a decision on KIUC's request is not yet determined.

Discussion

- Clarifying Questions and Answers
- Beneficiary Comments