

Hawai'i Powered



Hawaiian Electric's Community Engagement: ETIPP & REZ

Hawaii Energy Policy Forum

September 7, 2022



Hawaiian
Electric

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Agenda

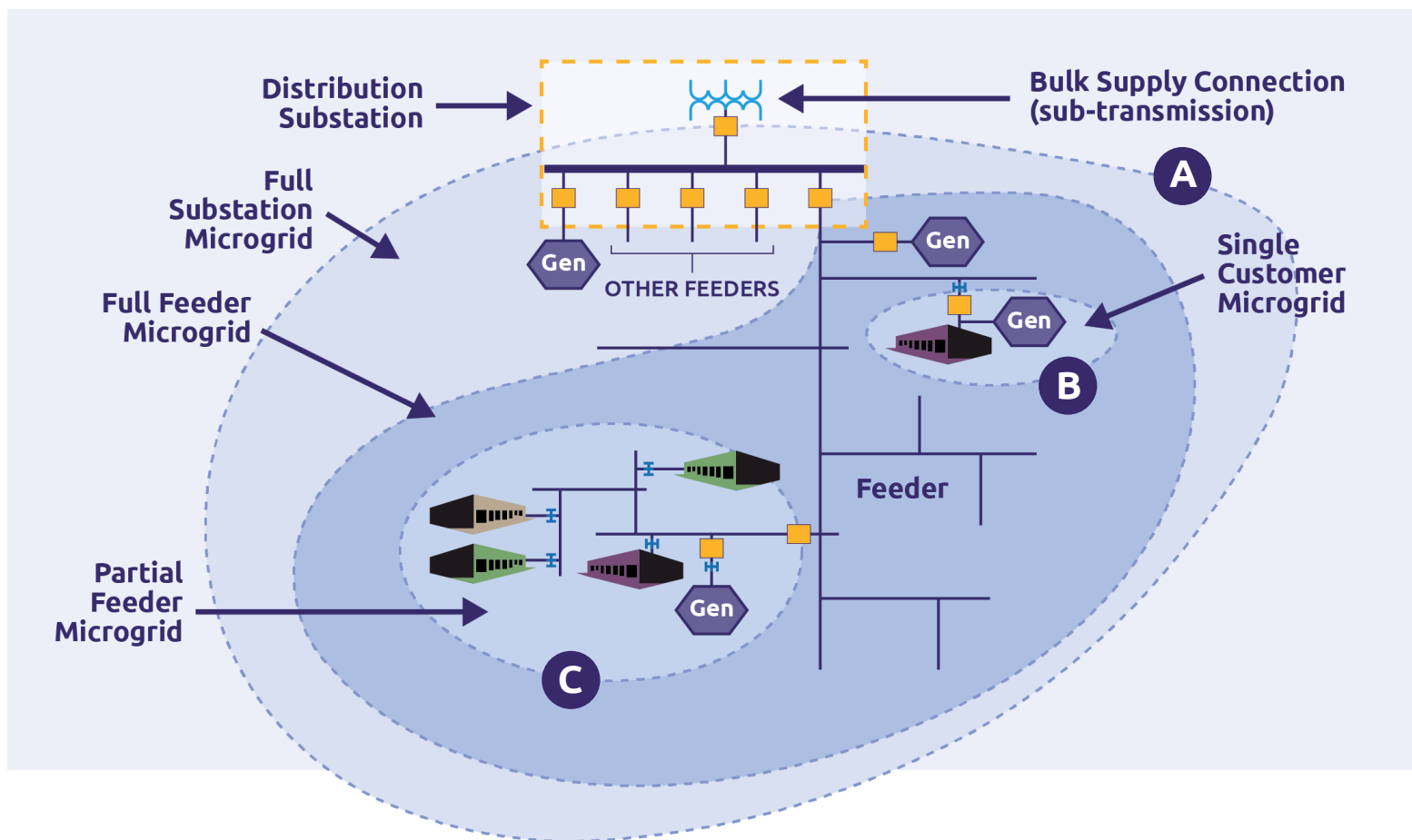
- Introduce ETIPP and REZ
 - Hawaiian Electric's Microgrid Initiatives
 - ETIPP's role in supporting microgrid development
 - Hawaiian Electric's Integrated Grid Plan
 - Renewable Energy Zones (REZ)
- Community Engagement Plan



Ultimately, we want your feedback or suggestions to improve our community engagement



Hawaiian Electric's Microgrid Initiatives



A **Utility Microgrid**
(Ex. North Kohala Microgrid)

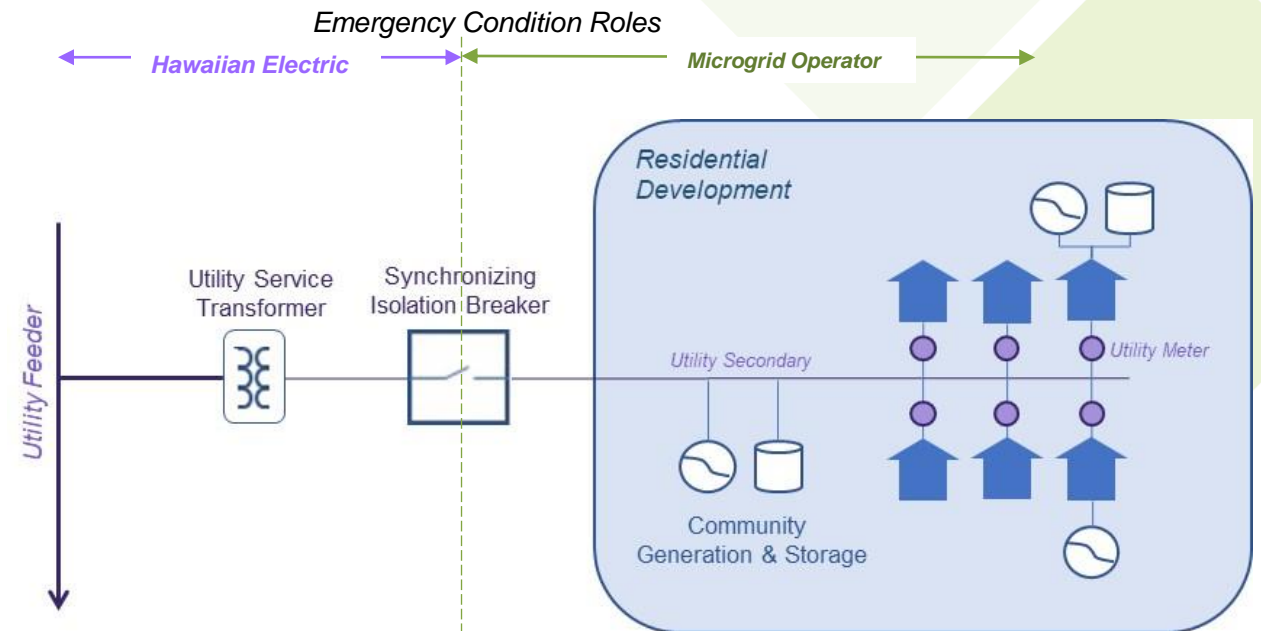
B **Customer Microgrid**
(Ex. Customer Grid Supply,
Customer Self Supply)

C **Hybrid or Community
Microgrids**
(Ex. Rule 30:
Microgrid Services Tariff)

Rule No. 30: Microgrid Services Tariff

Effective May 2021

- Program-approach for private microgrid development
- Operating Agreement for Hybrid Microgrids
- Allows the use of utility infrastructure within the microgrid boundary



Energy Transitions Initiative Partnership Project

The U.S. Department of Energy's (DOE) Energy Transitions Initiative Partnership Project (ETIPP) works alongside **remote, island, and islanded communities** seeking to transform their energy systems and **increase energy resilience through strategic energy planning** and the implementation of solutions that address their specific challenges.



Objective: Provide customers with a map identifying areas that are good candidates for hosting hybrid microgrids.



Considerations: Electric grid layout, customer-sited resources, reliability, equity, etc.

Evaluating Hybrid Microgrid Hosting Locations

Criticality

Where are the critical loads, facilities and services?

- **Emergency:** emergency shelters, fire stations, EOC
- **Medical:** hospitals, out-patient facilities, surgical centers, skilled care facilities
- **Infrastructure:** water sources & treatment, internet exchange points, transmission towers, dams, bridges, ports, airports

Vulnerability

What parts of the grid currently and are projected to endure the longest or most frequent outages?

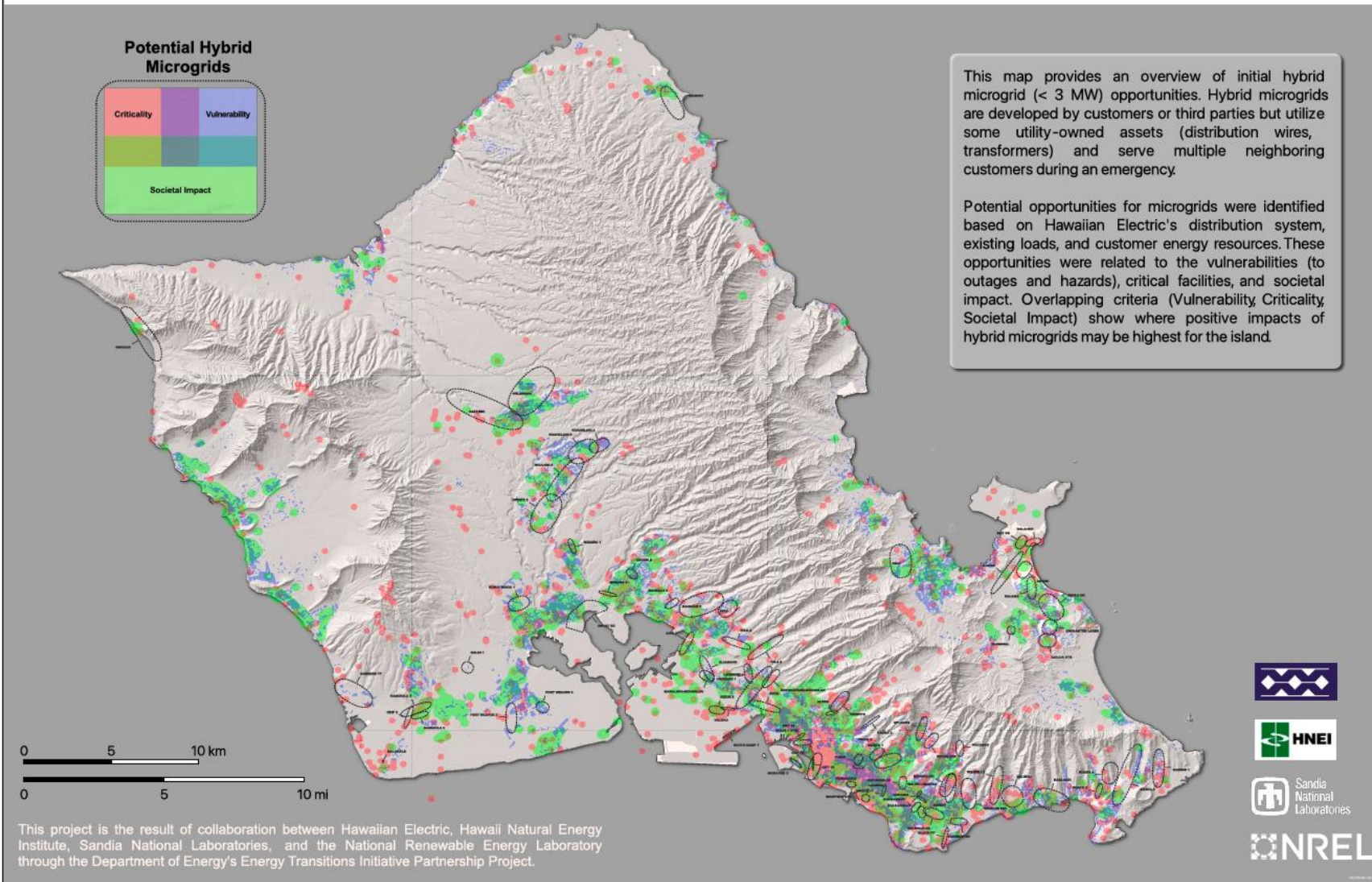
- **Natural hazards and inaccessibility:** flood, sea-level rise (through 2050), landslide, tsunami, remoteness
- **Outages** (2011-2021)

Societal Impact

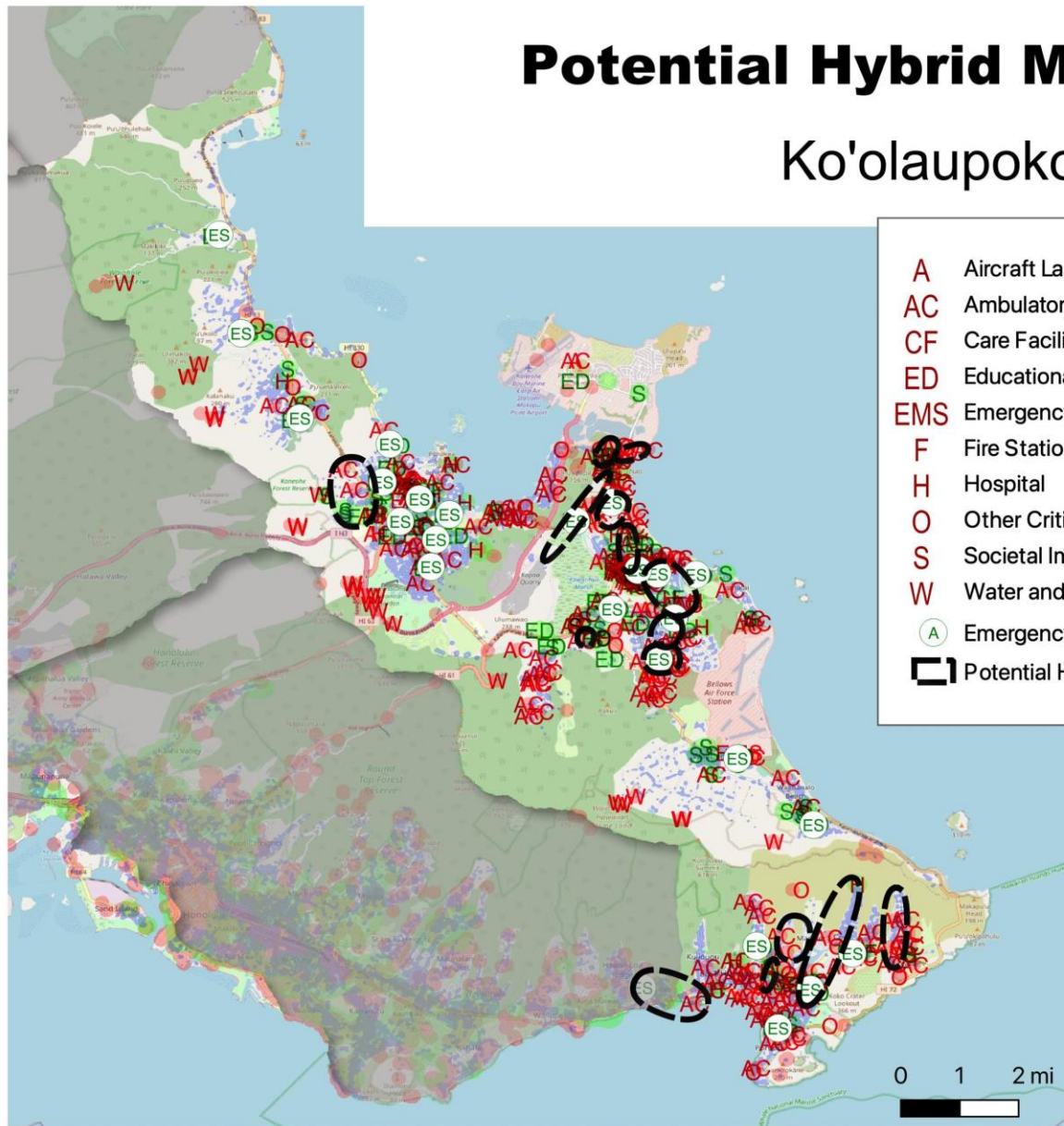
What other locations would significantly impact communities if they lost power?

- Residential care facilities, community homes
- Schools, daycares, libraries
- ALICE program
- Disadvantaged communities (EJScreen)

Initial Hybrid Microgrid Opportunities on Oahu



Potential Hybrid Microgrids: Ko'olaupoko



- A Aircraft Landing
- AC Ambulatory Care
- CF Care Facility
- ED Educational Facility
- EMS Emergency Medical Services
- F Fire Station
- H Hospital
- O Other Critical
- S Societal Impact
- W Water and Waste
- ES Emergency Shelters
- Potential Hybrid Microgrid

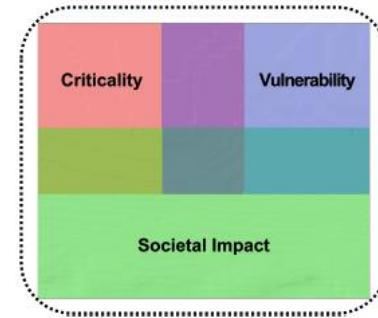
Potential hybrid microgrids include locations considered critical to communities (red), locations with significant societal impacts, and locations vulnerable to long and/or frequent outages (blue). Individual facilities are shown to their nearest distribution section (not actual location). Approximate locations of multiple individual facilities per section is indicated by the overlaid site label.



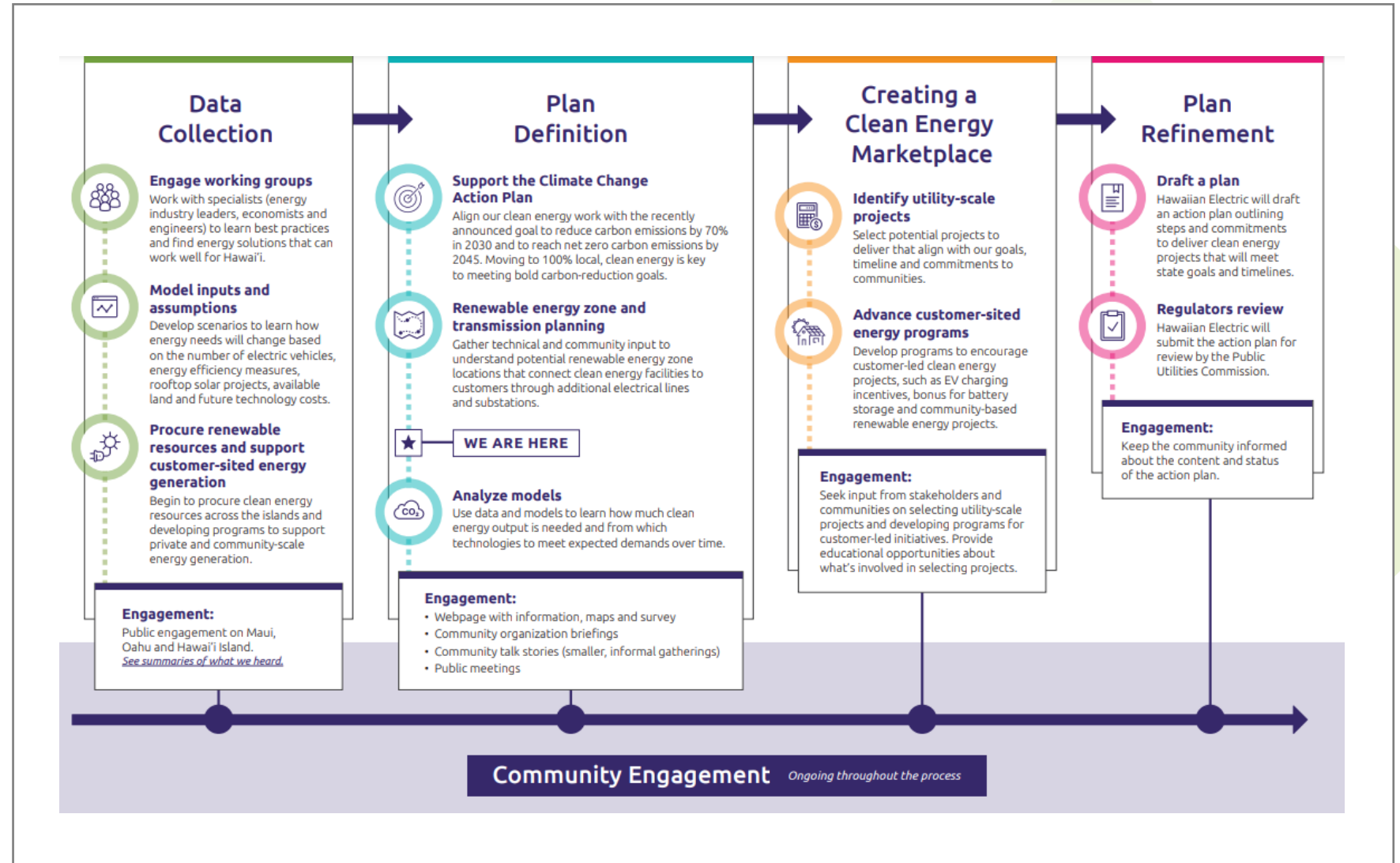
Hauula Potential Hybrid Microgrids



Potential Microgrids
 Parcels

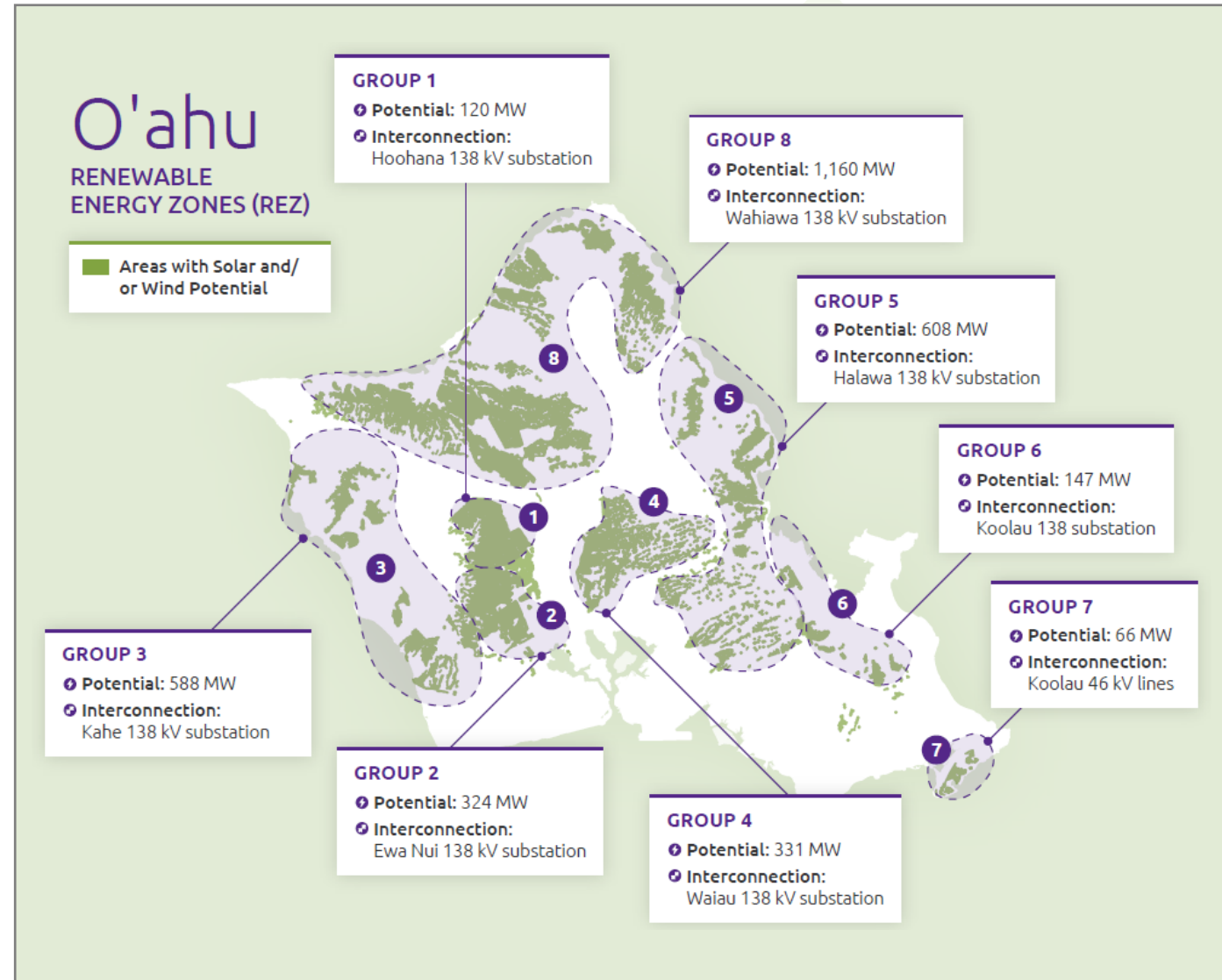


Integrated Grid Planning



Renewable Energy Zones

- Identify areas with high wind/solar potential to determine the supporting transmission infrastructure.
 - Supports the IGP process with providing transmission-related costs based on location
 - Provides awareness of the all-in requirements to build utility-scale renewables in certain areas
 - With current infrastructure, the ability to add locationally-diverse, renewable energy at scale is getting more challenging
- *An initial study was conducted to determine requirements to enable most/all of the zones. Community input is needed to iterate the process.*



Next Step: Community Engagement

- Coordinated with Hawaiian Electric's Integrated Grid Planning (IGP) process
- **Objectives:**
 - Provide awareness of the ETIPP mapping process and Renewable Energy Zones
 - Obtain meaningful feedback



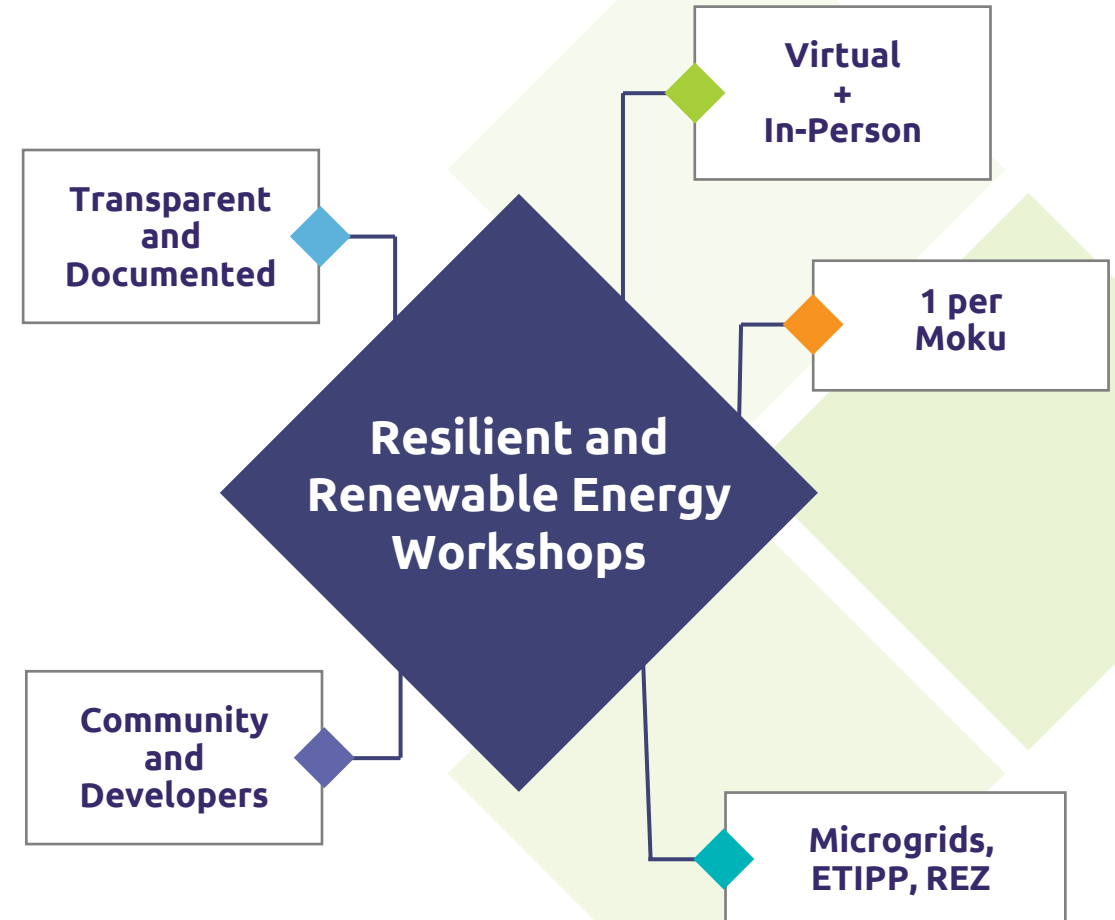
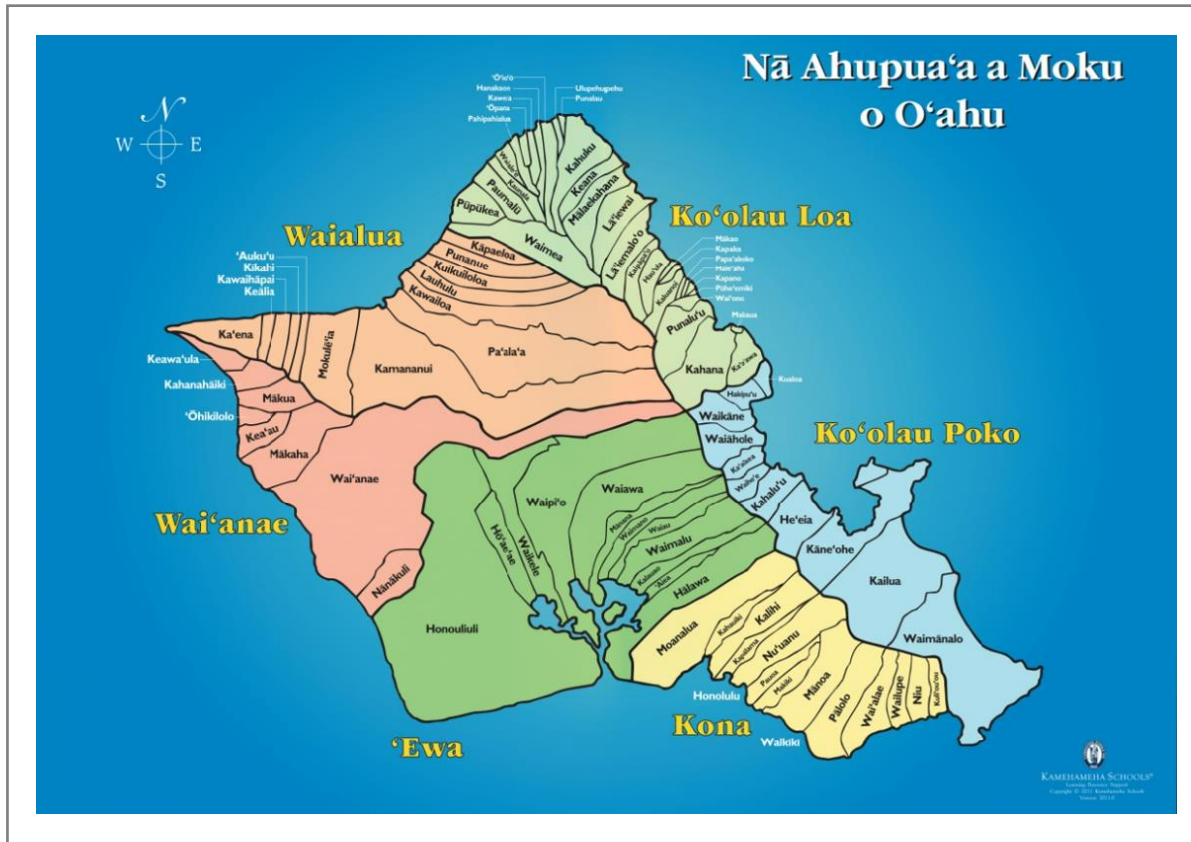
ETIPP Example Questions:

- Should microgrids be prioritized in communities?
- What criteria are important (or missing) for identifying microgrids?
- What areas are best suited for microgrids in your community?
- What community facilities would benefit most from a microgrid?

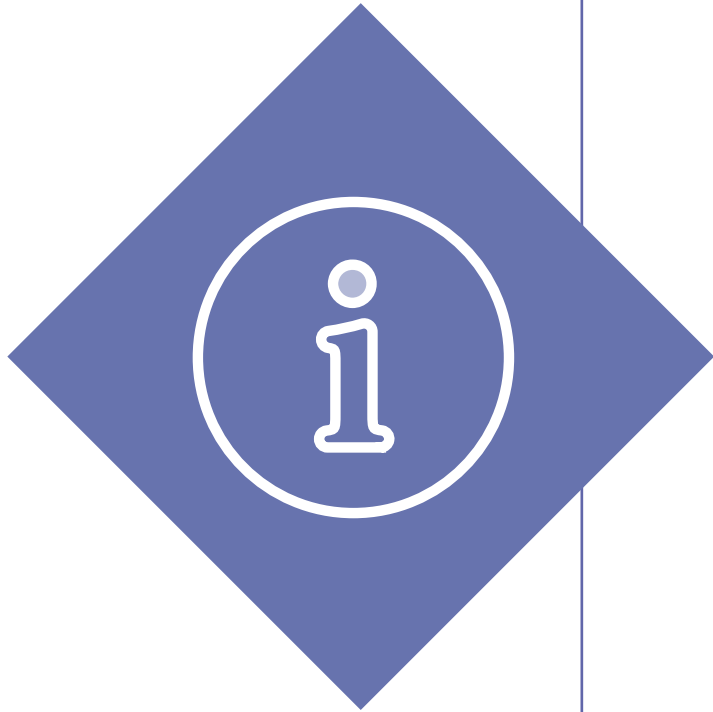
Renewable Energy Zones Example Questions:

- What type of renewable energy projects do you want to see in your community?
- What sensitivities are important to be considered in your community?
- Other considerations in planning for renewable energy zones?

Engagement Plan



Example Workshop Agenda



- Open House

- Introduction – Purpose of meeting

- Hybrid Microgrids 101 and Mapping
 - Community questions and input

- Renewable Energy Zones analysis/concept
 - Community questions and input

- PAU

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Mahalo for your time

Questions?

Learn More



hawaiianelectric.com/clean-energy-Hawaii/integrated-grid-planning



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