

100% Renewable Energy in Hawaii: It's No Longer A Matter of When

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Presented By:





THE GUERNSEY REPORT:

AN ANALYSIS OF ALTERNATIVE UTILITY MODELS FOR MAUI COUNTY

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DISCUSSION AND Q&A FACILITATED BY

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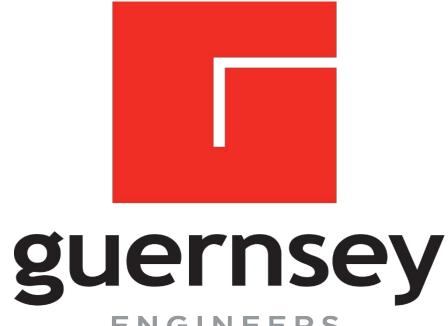
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REALIZE THE DIFFERENCE



The Guernsey Report:

An Analysis of Alternative Utility Models for Maui County

Agenda



- Introduction to Guernsey
- Our Objectives
- Our Findings
 - Independent System Operator (ISO)
 - Municipal Ownership
 - Cooperative Ownership
- Potential Benefits
- Moving Forward

Introduction to Guernsey



- Guernsey was established in 1928 as a civil engineering firm, working out of the owner's garage
- After the Rural Electrification Act of 1936, Guernsey power engineers helped to establish some of the first electric cooperatives bringing power to unserved areas
- Guernsey currently works for hundreds of municipal and cooperative utilities, including participation in RTOs
- Guernsey evolved into a full-service architecture, engineering and consulting firm, headquartered in Oklahoma but with projects throughout the US and internationally
- Guernsey established an office in Honolulu from 1999 to 2009

Report Objectives



- Analyze alternatives to the status quo for provision of electric utility services to Maui County
 - Municipal utility
 - Cooperative utility
 - Independent System Operator
- Address energy security/resiliency, cost, and ability to integrate renewable energy to beat timeline to 100%
- Provide high-level conclusions and recommendations to enable County leadership to make go/no-go decision

Report Findings: 150



- Creation of an Independent System Operator is a (relatively) lowcost, high-impact step to achieve the stated objectives
- About 60% of US electrical supply is managed by Regional Transmission Organizations (RTOs)
- Application for Maui County presents challenges of scale; the ISO framework would have to be adapted to suit the unique strengths and challenges posed by the island environment

Report Findings: 150



- Why ISO?
 - Independence from market participants
 - Transmission tariff administration and design
 - Congestion management
 - Establish open-access, real-time pricing / information systems
 - Market Monitoring
 - Planning and expanding the transmission/distribution system
 - Provide non-discriminatory access to system

Report Findings: 150



- Key benefits:
 - Market transparency
 - Access
 - Pricing signals
 - Independence
 - Indifferent to source of generation
 - Planning and expanding/improving distribution system
 - Competition

Report Findings: Municipal



- Key differences to status quo:
 - Not-for-profit entity: County would not require an operating profit
 - Non-taxed entity: County would not pay income tax
 - No access to equity markets: County would fund utility through utility rates, debt, or other County financial resources
 - Debt Service Coverage (DSC): requirement of rating agencies for the County to earn a multiple of its minimum cash flow requirements to service the debt

Report Findings: Cooperative



- Substantially similar to Municipal alternative:
 - No profit/taxes, no access to equity markets, DSC requirements
- Conceptually more independent (non-governmental entity)
- More flexibility in use of DSC-related cash surplus
 - Funding system repairs, improvements or expansions
 - Returning surplus to customers via capital credits
- A cooperative would be financially independent from the County; cooperative indebtedness would not impact the County's sterling bond ratings

Potential Benefits



- Municipal or cooperative ownership of utility assets would eliminate profit and income taxes, saving approximately 6%
- ISO establishes open, transparent and fair competition for power producers; Maui market would have to be studied, but mainland RTOs achieve savings in excess of 5%
 - Savings are dollars AND emissions
- System improvements are independently planned to maximize access, security and resiliency
- Longer-term goals: operational efficiencies, reduction of fossil fuel inventories

Moving Forward



- Guernsey's analysis was the first step: a high-level survey to determine whether any of the alternatives have merit for the citizen ratepayers of Maui County
- Some questions were answered, more questions were raised
- More study is needed to inform a strategic decision to pursue an ISO, alternative system ownership or both



Thank You!