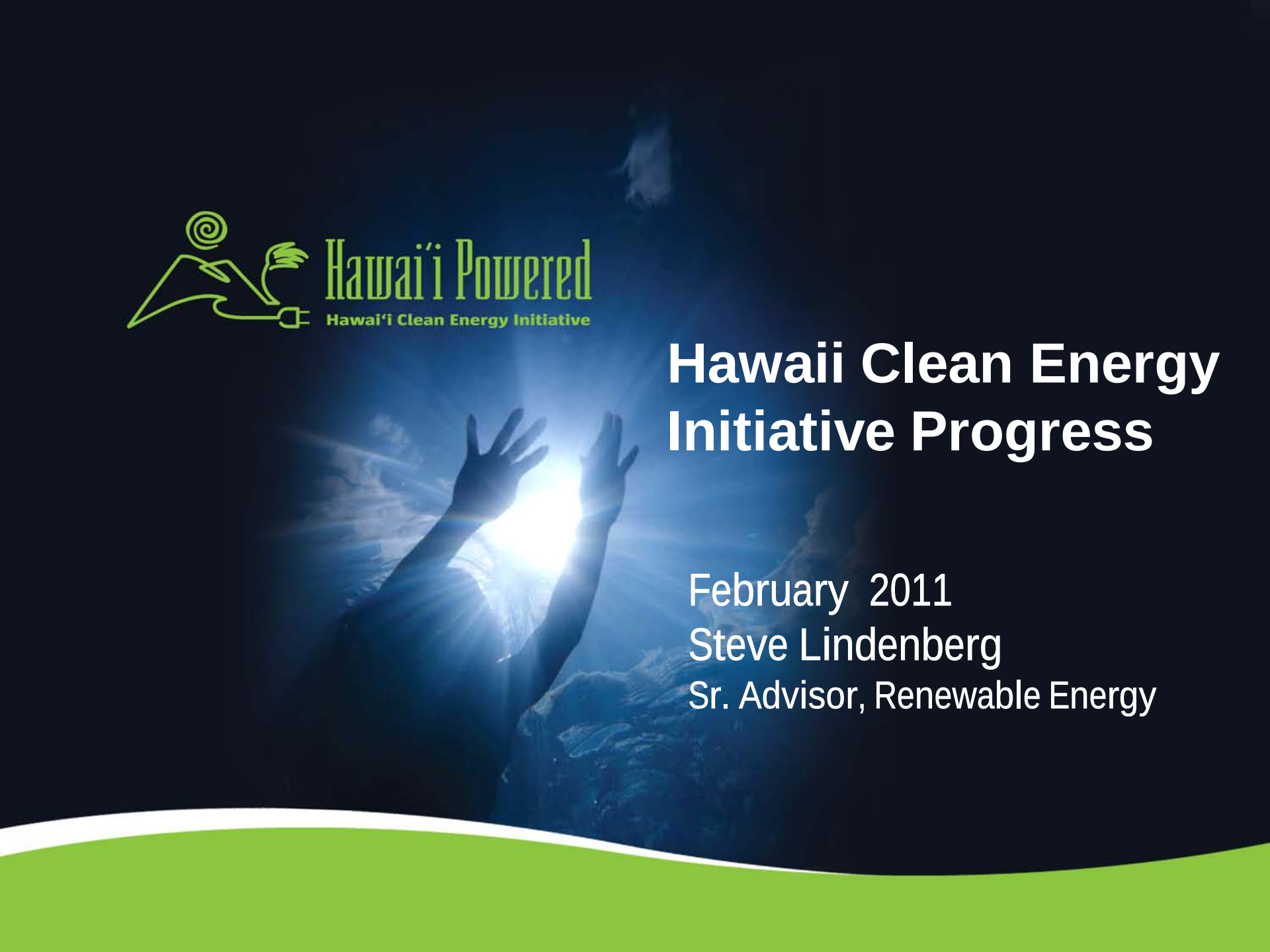

Hawaii Clean Energy Initiative Progress

February 2011

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HCEI Goals

HCEI provides a framework to help Hawaii realize these goals:

- Transform State to a 70% clean energy economy by 2030
- Stabilize energy cost volatility and protect brittle economy
- Reap economic and environmental benefits of transformation, including:
  - Increasing Hawaii's energy and economic security
  - Fostering and demonstrating Hawaii's innovation
  - Building the work force for the future
  - Serving as a clean energy model for the U.S. and the world
- Similar to Post Carbon Institute, ICLEI, CEC RESCO and Transition US
- Crisis has been our leading motivator (Greensburg, New Orleans, Hawaii)

HCEI Long-Term Commitment

HCEI established in statute with the passage of Act 73 in April, 2010

The Hawaii Legislature solidified Hawaii's commitment to reaching HCEI's clean energy goals and formalized the objectives, partnerships, resources, and reporting requirements

HCEI represents a vital collaboration of committed stakeholders

- Federal, state, and county governments
- Non-profit organizations
- Academic institutions
- Military installations
- Private sector: utilities, refiners, project developers, builders, farmers, landowners, and the automotive industry

Predictability of price and government action has drawn many firms to Hawaii

Stakeholders

Local Government

Private Sector (Including Utilities)

Non-Governmental Organizations

Trade Associations

State Government

Universities

Federal Government Agencies

County Economic Development Boards

Information Users

All HCEI Stakeholders

-PLUS-

State Legislature

State Regulatory Bodies

Local Communities

Local Businesses

Critical Feedback Loop

Electricity Sector Accomplishments

- Established 40% State Renewable Portfolio Standard
- Completed HECO Energy Agreement with the state:
  - Energy commitments
  - Measures to increase energy efficiency
  - Improvements to grid operation and infrastructure
- Set aggressive renewable energy goals with Kauai Island Utility Cooperative
- Numerous PUC dockets completed and in process to change utilities
- Completed construction of 30MW Kahuku Wind Farm on Oahu
- Constructed and commissioned bio-fueled Campbell combustion turbine
- Established Hawaii as the nation's leader in growth rate of distributed generation PV installation
- Completed wind and solar power grid-integration and grid-impact studies for all islands

Efficiency Sector Accomplishments

- Set 30% Energy Efficiency Portfolio Standard to 4,300 GWh by 2030
- Created and launched public benefits fund to finance retrofitting of building energy efficiency technologies
- Launched state "Lead By Example" program
- Established new highly efficient building codes (IECC 2006 or higher), which have been adopted by all counties in Hawaii
- Adopted approach of decoupled utility revenue stream from kWh usage
- Weatherized hundreds of homes across the State
- Working with Building Industry Association on new homes
- Coordinating with DoD on housing stock retrofits

Transportation Sector Accomplishments

- State began numerous collaborative partnerships with automotive manufacturers infrastructure suppliers to accelerate the deployment of electric and hydrogen vehicles.
- Hawaii EV-Ready Program is providing $4 million in grants and rebates for installation of EV charging network and the purchase of plug-in vehicles
- Oahu Transit Services operating 80 HEV transit buses for routine service
- General Motors and Gas Company launched Hawaii Hydrogen Initiative to develop hydrogen production distribution and fuel cell vehicles for Hawaii
- City and County of Honolulu fleet continues to use locally-produced biodiesel
- DoD expanding Hydrogen infrastructure and vehicle fleets as demonstration

Fuels Sector Accomplishments

- Bio-energy master plan completed
- HECO running the only bio-fueled turbine generator in the world
- Biodiesel is made and delivered on the four main islands
- Several small-scale crop trials underway
- Several pilot, drop-in replacement fuel refinery projects underway
- HECO issued an RFP for 210 million gallons/year (MGY) of locally-produced biofuels and has signed one contract
- PACOM launched Green Initiative for Fuels Transition Pacific (GIFTPAC) for replacing 25% of its current aviation and marine diesel fuels in Hawaii with renewable fuels.
- Bio-fuels being tested and certified in steam boiler plant on Oahu

Lessons Learned from Integrated Deployment

- Scope is related to scale of the affected community and threat
- Partnerships are critical among the decision making stakeholders
- Businesses must be included to implement plans with resources
- Resources for analysis defines primary opportunities for group
- Set a big vision and demonstrate possibility for accomplishment
- Establish a climate of predictable business and financial success
- Celebrate accomplishments and tell stories to create understanding
- Engage all partners in the outreach to public with simple messages
- Manage transitions to maintain progress and keep focus over years
- Develop joint agreements on the process and roles of partners
- Recognize the contributions of all and the share the credit broadly