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Hawaii Clean Energy Programmatic EIS (PEIS)

BOEM/Hawaii Intergovernmental Renewable Energy Task Force

May 16, 2016

Hawaii Clean Energy PEIS

The Department of Energy and the State of Hawaii entered into a Memorandum of Understanding (MOU) in January 2008 establishing the Hawaii Clean Energy Initiative (HCEI) and developed the Hawaii Clean Energy Programmatic EIS (PEIS) in cooperation with the State of Hawaii and other Federal agencies, including BOEM.

- Intended to inform the public, Federal and State agencies, Native Hawaiian and other organizations, and future energy developers on the potential environmental impacts of a wide range of renewable energy technologies and energy efficiency activities that could be used to support the HCEI.
- Analyzed potential environmental impacts associated with 31 clean energy technologies including offshore wind that could be used to support HCEI goals and objectives on the six Main Hawaiian Islands.
- For each activity or technology, the PEIS identified potential impacts to 17 environmental resource areas and potential best management practices that could be used to minimize or prevent those potential environmental impacts.
- Used hypothetical representative projects to evaluate the potential environmental impacts from the various activities and technologies that could be implemented to meet HCEI goals.

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PEIS Clean Energy Categories and Technologies

Clean Energy Category	Technology or Activity
Energy Efficiency	Energy Efficient Buildings
	Energy Conservation
	Ground Source Heat Pumps
	Initiatives and Programs
	Sea Water Air Conditioning
	Solar Water Heating
Distributed Renewables	Biomass
	Hydroelectric
	Hydrogen Fuel Cells
	Photovoltaic
	Wind
Utility-Scale Renewables	Biomass
	Geothermal
	Hydroelectric
	Municipal Solid Waste
	Marine Hydrokinetic Energy
	Ocean Thermal Energy Conversion
	Photovoltaic
	Solar Thermal
	Wind (Land-based)
	Wind (Offshore)
Alternative Transportation Fuels and Modes	Biofuels
	Electric Vehicles
	Hybrid Electric Vehicles
	Hydrogen
	Compressed and Liquefied Natural Gas and Liquefied Petroleum Gas
	Multi-Modal Transportation
Electrical Transmission and Distribution	On-Island Transmission
	Undersea Cables
	Smart Grid
	Energy Storage

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PEIS Offshore Wind

- Representative Offshore Wind project:
  - 50 MW
  - 10 Floating Wind Turbines
  - Federal waters (5 miles)
  - Water depths > 200 feet
- Offshore wind technology described and characterized with permitting and consultation requirements
- Analyzed potential impacts of onshore and offshore activities and developed best management practices for 17 resources areas
- Best management practices to be incorporated into all BOEM future Hawaii offshore wind projects

PEIS Cooperating and Participating Agencies

Agency	Department/Office
Lead Agency	**Department of Energy**
Cooperating Status	
U.S. Department of the Interior	**Bureau of Ocean Energy Management**
	National Park Service
U.S. Department of Agriculture	Natural Resources Conservation Service
U.S. Environmental Protection Agency	Region 9
U.S. Department of Defense	U.S. Marine Corps
	U.S. Navy
U.S. Department of Transportation	Federal Aviation Administration
State of Hawaii	**DBEDT in coordination with other State agencies**
Participating Status	
U.S. Department of the Interior	U.S. Geological Survey
	U.S. Fish and Wildlife Service
Advisory Council on Historic Preservation	N/A
U.S. Department of Agriculture	Farm Services Agency
U.S. Department of Commerce	National Marine Fisheries Service
	National Oceanic and Atmospheric Administration, National Ocean Service, Office of National Marine Sanctuaries
U.S. Department of Transportation	Federal Highway Administration
U.S. Department of Homeland Security	U.S. Coast Guard
U.S. Department of Defense	U.S. Army Corps of Engineers

PEIS Public Participation Process

- Initially proposed by DOE in 2010 as the Hawaii Interisland Renewable Energy Program: Wind PEIS (HIREP) with State as a joint lead agency
- Public scoping meetings held on Oahu, Maui, Molokai and Lanai
- Based on public input during the meetings, the scope of the PEIS was broadened to more comprehensively evaluate the potential environmental impacts of a wide range of energy efficiency activities and renewable energy technologies that could be used to support the HCEI.
- Project was re-scoped and amended the NOI as the Hawaii Clean Energy Programmatic EIS (PEIS)
- Eight public scoping and eight draft PEIS public review and comment meetings were additionally conducted on all six Main Hawaiian Islands.
- A total of 20 public meetings and over 700 comment documents were received and responded to and incorporated as appropriate into the document
- Encouraged to participate through six newspapers, postcards and email distributions, press releases and a website
- **A testament to how public engagement resulted in a better and more comprehensive analysis to meet community and renewable energy goals!**

PEIS Takeaways

The PEIS indicated the State of Hawaii has particular interest in the potential impacts to four environmental resource areas:

- **Biological resources** due to the large number of threatened and endangered species and unique island habitat
- **Land and submerged land use** based on the finite characteristics of this resource to the islands' environments
- **Cultural and historic resources** because of the strong and long-standing beliefs of the native population and their relationship with the islands' physical environment
- **Scenic and visual resources** because of both the cultural and historic aspects, as well as the importance to the tourism appeal of the islands