

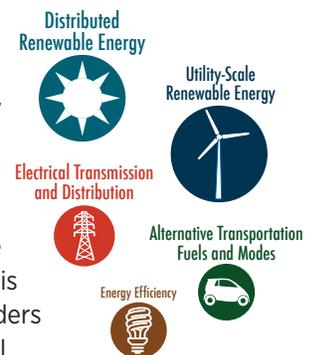
Benefits and Applications of the **HAWAII** CLEAN ENERGY PEIS

What is the Hawai'i Clean Energy PEIS?

The U.S. Department of Energy (DOE), in cooperation with the State of Hawai'i, prepared a Programmatic Environmental Impact Statement (PEIS) that supports the State of Hawai'i in achieving its goal of meeting 100 percent of the State's energy needs with clean, renewable energy by 2045. The intent of the PEIS is not to analyze potential environmental impacts of a particular project, but rather to provide guidance to policymakers, developers, regulators, and the public to better determine the renewable energy activities and technologies that would best meet their specific future energy needs. For instance, a developer may be interested in installing a specific renewable energy technology in a particular location. The developer could refer to the PEIS for typical impacts associated with that specific technology and potentially sensitive resources associated with the particular location. To this end, the PEIS defined "representative projects" for each activity and technology that could be implemented in Hawai'i by 2045 based on realistic capacity factors and feasibility. The representative projects are hypothetical and not intended to represent any real or proposed project and are provided for analytical purposes only.

Why use the Hawai'i Clean Energy PEIS?

Most clean energy projects have the potential to cause environmental impacts, especially if not implemented properly. There are many challenges when working with established and emerging technologies, which could cause project delays, inefficient processes, and added costs. The PEIS is a comprehensive source of the typical federal, state, and county laws, regulations, and permitting requirements of renewable energy projects. While most of the material can be found online, the PEIS has sorted through the vast amounts of information, conducted technical reviews, and organized the PEIS to align with the 31 clean energy technologies and activities that could be used to meet the State's clean energy goal. The PEIS also includes website references of information that is routinely updated to ensure readers get the most up-to-date material.



Who can benefit from the Hawai'i Clean Energy PEIS?

GENERAL PUBLIC, ACTIVE PARTICIPANTS, AND COMMUNITY ORGANIZATIONS

WHAT ARE THE CHALLENGES?

- Information overload. Individuals can become overwhelmed with the amount of information available about the potential environmental impacts from clean energy technologies.
- Reliable information. Disorganized or unreliable sources of information tend to reduce participation from the general public in energy planning matters and/or cause the dissemination of inaccurate information.

PEIS SOLUTIONS

- A valuable collection of information in a single location, condensed from hundreds of sources and reviewed/vetted by DOE experts in clean energy.
- Written with a level of detail sufficient to provide the average reader with a basic understanding of 31 activities and technologies.
- Provides a general perspective of the types and magnitudes of potential environmental impacts that could be expected from each of the activities and technologies.
- References to additional, reliable resources for more in-depth research.
- The opportunity to become better informed about decisions related to energy, which helps the regulatory oversight process.
- A reliable resource for introducing students to the relationship between clean energy and the environment, including the development of appropriate workforce training and scholastic curriculum.

ENERGY DEVELOPERS

WHAT ARE THE CHALLENGES?

- Incomplete analyses. Certain environmental impacts may be overlooked and/or understated during project planning and development, leading to issues and complications that can jeopardize the continued development or operation of a project.
- Unnecessary paperwork. Identifying and addressing the correct environmental impacts early in the planning stage will streamline work processes.

PEIS SOLUTIONS

- Identification and discussion of sensitive environmental resources at different geographical locations before investing in those areas. This could result in variations in design or complete avoidance of the area to minimize potential impacts and increased costs.
- Comparative analyses of potential impacts between and among technology alternatives (e.g., solar vs. wind vs. biomass vs. marine hydrokinetic).
- Scalable impact estimates for each technology (e.g., impacts provided for a 50 MW facility and how those impacts change in relation to the size of the project).
- A correlation between design elements and potential impacts for various environmental resources. This information can be used by project designers to minimize impacts while optimizing energy production.
- A discussion of the general permitting and regulatory requirements for renewable energy projects and applicable requirements for specific technologies. This knowledge could streamline future permitting processes or allow communications about permitting to begin earlier in the schedule.

REGULATORY AGENCIES AND BODIES

WHAT ARE THE CHALLENGES?

- Agency co-dependencies. There is often a need for information on the interdependencies among federal, state, and county entities related to permitting so that regulators can better understand the overall regulatory/jurisdictional framework for each project or technology.
- Conflicting information. Agencies and governing bodies reviewing projects may not always be aware of all the potential environmental impacts associated with a given clean energy project or technology, or may have conflicting information on the impacts. In many instances, this awareness does not come into focus until after specific projects are proposed.

PEIS SOLUTIONS

- Future NEPA documents prepared by federal agencies (or their contractors) can tier from the PEIS to allow streamlining of the project- and site-specific environmental review.
- State and county agencies can use the PEIS as a guide when reviewing various permits, approvals, and EISs/EAs prepared under the Hawaii Environmental Policy Act.
- Government proponents of future clean energy projects can use the PEIS as a roadmap for the evaluation of their project or those proposed by others.
- A source for zoning decisions based on the potential environmental impacts. It could include the consideration of multiple projects or cumulative impacts.

POLICYMAKERS

WHAT ARE THE CHALLENGES?

- Conflicting information. Policymakers considering new laws and programs related to clean energy may not always be aware of all the potential environmental impacts associated with a given clean energy project or technology, or may have conflicting information on the impacts, which can result in poor policies and programs in need of correction and/or ultimate repeal.

PEIS SOLUTIONS

- Information for policymakers on the potential environmental impacts of decisions across the range of clean energy technologies and areas throughout the state.
- By identifying the governmental entities involved in project regulation, policymakers can better understand the administrative and enforcement needs to sufficiently oversee a clean energy industry.

More Information

PEIS Website:

<http://www.hawaiiicleanenergyPEIS.com>

Hawai'i State Energy Office

<http://www.energy.hawaii.gov>

DOE Office of Energy Efficiency and Renewable Energy

<http://www.energy.gov/eere/office-energy-efficiency-renewable-energy>

