

Measuring Progress Towards Hawai'i Clean Energy Goals: **Developing Metrics and Status Reports:**

A Project Coordinated by the
Hawai'i Energy Policy Forum

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- Audience

- Decision Makers
- Academic Community
- General Public

- Objectives

- Develop and Distribute Accurate and Reliable Information
- Maintain Support for Clean Energy Policies and Projects

Why Develop Metrics?

- Audience
 - Decision Makers
 - Academic Community
 - General Public
- Objectives
 - Develop and Distribute Good Information
 - Maintain Support for Clean Energy Policies and Projects

Project Phases

- **Phase I:** Planning and Design
 - What do we want to measure?
 - What are appropriate metrics?
- **Phase II:** Refinement, Data Collection, Calculation of Metrics, Reporting Methods
- **Phase III:** Ongoing Data Maintenance and Periodic Status Reports

Stakeholder Working Group

- Energy Committee Chair- State House of Representatives
- Energy Committee Chair – State Senate
- Hawaii State Energy Office/Department of Business, Economic Development & Tourism
- Public Utilities Commission
- Hawaii Energy, State Energy Conservation & Efficiency Program
- State Department of Health
- State Department of Transportation
- County of Maui Energy Coordinator
- County of Kauai Energy Coordinator
- County of Hawaii Energy Coordinator
- Hawaiian Electric Company
- Kauai Island Utility Cooperative
- Chevron
- Tesoro
- Life of the Land
- Hawaii Natural Energy Institute, University of Hawaii
- University of Hawaii Economic Research Organization
- Hawaii Energy Policy Forum, University of Hawaii

Phase I Results: Recommended Metrics

- Attainment of State Standards
- Attainment of Underlying Objectives
- Overall Clean Energy Progress Indicator
- Progress on Projects and Programs

Attainment of State Standards

- Renewable Portfolio Standards
- Energy Efficiency Portfolio Standards
- Clean Energy Initiative Goals
- Greenhouse Gas Emission Goals

Attainment of Underlying Objectives

- **Reducing carbon footprint**
 - Metric: Fossil carbon energy content of Hawaii fuel use
- **Reducing export of dollars from Hawaii**
 - Metric: Expenditures on fuel imports to Hawaii
- **Reducing energy cost volatility**
 - Metric: Hawaii fuel portfolio cost volatility
 - Metric: Hawaii fuel portfolio cost correlation to world crude petroleum price

Attainment of Underlying Objectives

- **Creating “green jobs”**
 - **Metric: Change in “green” category jobs**
- **Increasing fuel supply reliability**
 - **Metric: Hawaii fuel portfolio supply risk expressed as a weighted average of fuel types**
- **Maintaining affordability of energy costs**
 - **Metric: Total actual consumer level (retail) energy expenditures**
- **Reducing environmental impacts**
 - **Metric: To be determined / Not quantified.**

Overall Summary Clean Energy Progress Indicator

- **Metric: Fossil energy content of Hawaii fuel use (BTU) per person (defacto population)**
- **Index of attainment of underlying objectives**

Progress on Projects and Programs

- **Renewable energy projects**
 - **Metric: MW of renewable energy projects installed (since benchmark date) and “in pipeline”**
- **Energy efficiency programs**
 - **Metric: MWH and MWH per year energy savings from energy efficiency programs**
- **Transportation initiatives**
 - **Metric: Impacts of state transportation sector initiatives on fuel consumption**
 - **Metric: Impacts of state and county land use planning impacts on transportation sector fuel consumption**

What's Next

- **Phase II:**

- Refinement of recommended metrics
- Data gathering and populating metrics
- Designing data portal modifications
- Designing status reports

- **Phase III:**

- Ongoing data development and status reports