

**Division/Attached Agency:**

**Program Name:**

**Program ID:**

**I. PROGRAM PURPOSE AND PRIORITIES**

**Purpose of this program:** Summarize the purpose of this program based on statutory guidelines and functional statement.

The State’s energy program PURPOSE is based on statutory guidelines and functional statements identified as energy objectives, as set forth in Chapter 226-18, Hawaii Revised Statutes (HRS); stated energy planning and policy activities, as set forth in Chapter 196, HRS; and energy emergency and security functions identified within Chapters 125C, 127, and 128, HRS.

- The statutory basis of Hawaii’s energy program is provided in HRS Chapter 226 (Hawaii State Planning Act), §18, whereby the state’s energy objective is to reduce dependence on imported oil.
- Chapter 196, and Chapter 226-18, HRS, require state energy planning and project activities in energy efficiency, renewable energy, energy security, and clean fossil energy resources to support achievement of these energy policies. SID also supports Chapter 226-18(a), HRS, which provides DBEDT: [S]hall . . . encourage the development and promotion of industry and international commerce through programs established by law.
- Chapters 125C, 127, and 128, HRS, assigns DBEDT roles and responsibilities to maintain the State’s energy emergency preparedness program, both as lead agency to plan for and manage fuel shortages, and energy-related emergency functional support to State Civil Defense under statewide emergency response plans.

**Program Changes:** What changes in the purposes or functions of the program are anticipated or requested and why?

To counter the downturn in the availability of state revenues the State Energy Program has aggressively pursued federal awards from the American Recovery and Reinvestment Act (ARRA) through the U.S. Department of Energy (USDOE). The grants sought are intended to catalyze research & development, testing & evaluation, or accelerate the development of renewable energy projects by providing funding to “tip” major energy projects currently in the pipeline toward completion; and establishing a sustained basis for additional renewable energy projects to be developed and completed.

SID obtained formula grants and generated additional revenues for the State by applying for Federal funds under ARRA. Four awards for \$37 million have been awarded to the State. Also, SID recently submitted a proposal of \$10 million in response to a competitive grant opportunity relating to the Energy Efficiency Conservation Block Grant for a “Retrofit Ramp-up and General Innovation Fund Program.”

The State Energy Program is also looking at reorganization to enhance efficiency in conducting its activities.

The Strategic Technology Branch has focused on looking for outside funding and carrying out activities that require staff time only, such as building partnerships, but partnerships and leveraging external funding require some resources.

**Program Priorities.** Given the existing and anticipated program purposes and responsibilities what are the core priorities going forward and why?

The State's core energy priorities are as follows:

- **Reduce the use and importation of fossil fuels;**
- **Fundamentally change how Hawaii consumes energy;**
- **Develop and utilize more indigenous renewable resources;**
- **Reduce greenhouse gas emissions;**
- **Enhance and preserve the State's energy security; and**
- **Develop significantly increased investment in the Hawaii energy economic sector.**

The aforementioned program priorities are aimed at increasing Hawaii's energy independence and energy security. Hawaii is the most petroleum dependent State in the use of petroleum for its energy needs. It pays the highest electricity prices in the U.S. State energy costs for gasoline are among the highest.

The State's Energy Program priorities are being implemented through several initiatives including the Hawaii's Clean Energy Initiative (HCEI), the Energy Assurance Program (EAP), and Lead by Example (LBE).

- The goal of HCEI is to transform Hawaii from the most fossil fuel-dependent state in the Nation to an economy based on 70% clean and renewable energy by 2030, through increased and accelerated development and use of renewable energy resources and increased energy efficiency. To achieve HCEI goals will require the adoption of enabling energy policies and regulatory transformation.
- The EAP serves to enhance and ensure the State's energy security through effective assurance planning to ensure energy infrastructure system reliability and resiliency, as the State increases the use and adoption of more renewable energy resources and integration of new technologies such as smart grid in the energy system.
- The LBE program is aimed at changing the way State executive agencies use energy and resources in operations and facilities.

## II. PROGRAM GOALS

**Program Goals:** What are the specific long-term goals (up to 6 years) established to address the program's purpose and priorities?

The State Energy Program's long-term goals seek to accelerate energy system transformation through the Hawaii Clean Energy Initiative (HCEI) to:

1. Increase energy efficiency;
2. Accelerate the development and adoption of renewable energy resources and technologies;
3. Enhance and ensure energy assurance ;
4. Reduce greenhouse gas emissions; and
5. Ensure and protect consumer interests and benefits.

**Biennium Objectives:** What specific objectives and evaluation criteria (metrics, indicators) are planned for:  
 a) Year one of the current biennium?  
 b) Year two of the current biennium?

Energy objectives for the two year biennium focus on conducting projects, which will contribute to tangible energy system transformation for Hawaii. Tangible contributions to energy system transformation are planned through conduct of the following (see “Anticipated Contracts,” Attachment A):

1. Energy efficiency and green management technical assistance for government and public buildings; energy efficiency measures to assist county residential programs; implementation of seawater air conditioning; and “Energy Star” appliance education;
2. Interisland cable development;
3. Diversification and development of transportation energy alternatives and infrastructure;
4. On-line and expedited energy project permitting; and acceleration of startup-ready renewable energy projects; and
5. Grid-electric technical assistance to the State, and energy assurance planning.

These projects are further expected to achieve the following goals based on the benchmarks noted:

- Facilitate HCEI’s goal of energy independence and security through:
  - (1) Increased collaboration at the federal, State, and community level;  
**Benchmarks:** (a) number of energy programs developed and/or implemented in partnership with federal, state, and other entities; (b) number of energy programs facilitated and enabled by SID; (c) number of energy events and activities sponsored and/or co-sponsored by SID.
  - (2) Regulatory transformation through SID’s active engagement and participation in energy policy-related regulatory proceedings and utility-related programs;  
**Benchmarks:** (a) number of dockets that SID participated in; (b) number of regulatory changes and rulings adopted and approved by the PUC that facilitate achievement of HCEI goals; (c) number of utility programs effected by SID’s participation;
  - (3) Development and implementation of programs, energy policies, and other mechanisms to facilitate the development of Hawaii’s renewable energy market;  
**Benchmark:** (a) number of renewable projects facilitated by SID;
- Increase market acceptance of energy efficiency and renewable energy technologies, practices, and products through industry/government intervention;  
**Benchmark:** (a) number of systems installed, (b) percentage in market growth;
- Coordinate private and public sector energy related programs and activities whose purpose serves to preserve the State’s energy security; and  
**Benchmark:** (a) number of industry organizations active in the State’s Energy Council for energy emergency preparedness;
- Employ innovative approaches to target market segments and meet policy goals not typically addressed by market-based solutions.  
**Benchmark:** (a) number of changes employed to address issues identified, (b) number of legislative measures passed providing momentum for clean energy.

**Program Challenges:** Briefly summarize what opportunities constraints, etc. the program faces in addressing the biennium goals.

ARRA funding is providing the State Energy Program the opportunity to accelerate the development of renewable energy projects by providing funding to “tip” (start) projects currently stalled or in the pipeline for implementation.

The challenge the State Energy Program faces in addressing the biennium goals is the dwindling of federal resources which currently support non-ARRA energy programs and staff. Adequate resources commensurate to scope, nature, and long-term duration of work to be done will be required to achieve desired outcomes. Extent and success of existing and potential for future partnerships is largely based on DBEDT’s credibility, which requires capability and capacity to meet our partners’ expectations.

### III. PROGRAM ACCOMPLISHMENTS

**FY 2009 Goals and Accomplishments:** Please list the specific goals that were established for FY 2009 and indicate the extent to which those goals were accomplished.

In FY2009, increasing economic risk from extreme overdependence on higher-priced imported crude oil prompted SID to redirect priorities to core energy functions; i.e., energy efficiency, renewable energy and alternate fuels, comprehensive energy planning, and energy emergency preparedness. The goals related to these functions follow:

- Facilitate and collaborate on energy development;
- Address HCEI policy initiatives;
- Fulfill State-level energy emergency preparedness requirements; and
- Obtain additional sources of program funds.

In FY2009, the State was able to achieve the following related to energy:

- ❖ Solar Thermal, Electric Growing Quickly: Hawaii became the nation’s recognized leader in solar water heating, accounting for over one-third of all systems installed in 2008, according to a study by the Solar Energy Industries Association. Photovoltaics (PV) boomed in Hawaii, with most distributed renewable energy projects, including those under net-energy metering agreements, being PV. Hawaii had more than 15MW of PV installed, and is reaching the maximum allowed penetration in some locales. The Interstate Renewable Energy Council reported that Hawaii was third in the nation in terms of per-capita PV generation.
- ❖ In 2009, legislative accomplishments related to energy were:
  - a. Hawaii’s Renewable Portfolio Standard (RPS) became more aggressive, bringing its objectives in line with HCEI; the goal is now 40% renewable electricity by 2030.
  - b. A new Energy Efficiency Portfolio Standard (EEPS) now mandates measures to save 4,300 gigawatt-hours of electricity by 2030.
  - c. The State Energy Resources Coordinator now has authority to designate Renewable Energy Zones, and the role of the energy permitting facilitator has been expanded and clarified.
  - d. Another new law requires homeowners selling their residences to disclose the property’s electricity costs for a recent three-month period to prospective buyers.

- e. Hawaii is now one of only a few states to save parking space for electric vehicles—1% of the total spaces of any parking lot with at least 100 public stalls by December 31, 2011. The requirement will increase to 2% when at least 5,000 electric vehicles are registered in the state. There must also be at least one recharging station in the parking lot.
  - f. The State Energy Resources Coordinator received definitive policy guidance on maintaining the capacity to analyze the status of energy resources, systems, and markets in order to assess the effectiveness of policy and regulatory decisions, and to conduct energy emergency planning.
- ❖ SID was awarded \$35,965,296 in ARRA federal grants. Hawaii-based companies or companies specifically pursuing doing clean energy work in Hawaii additionally won over \$59 million in competitive procurements funded by the American Recovery and Reinvestment Act (ARRA) of 2009.
  - ❖ Hawaii has the highest penetration of Energy Savings Performance Contracts in the United States; with the addition this year of the DAGS performance contract and the Hawaii Public Housing Authority's performance contract. These are cost-effective means to reducing the energy budget for an organization with large infrastructures. The Departments of Transportation and Education as well as the UH System are all considering such contracts as well. The State Energy Program has been a major catalyst for such contracts at the State and County level.
  - ❖ The Public Utilities Commission (PUC) is supporting HCEI by considering transformative changes to Hawaii's electricity regulation. Encouraged by HCEI the PUC is deliberating on major changes to the utilities' procurement methods for renewable energy; the utilities' ratemaking procedure, and how planning for clean energy will proceed. These deliberations are considering the following changes:
    - a. Feed-in-tariffs;
    - b. Decoupling;
    - c. PV Host; and
    - d. Clean Energy Scenario Planning.

For the first time, SID is actively participating and affecting the regulatory proceedings on energy policies such as in the aforementioned issues.

In addition, these proposed changes continue the progress via implementation of the 2008 Energy Agreement between the State and Hawaiian Electric Company (HECO) to address HCEI policy initiatives.

**FY 2009 Evaluation:** What opportunities, constraints, unexpected events, etc. were encountered, how were they addressed, and what impact did they have on accomplishment of goals in FY 2009.

In FY2009, the local and national economic downturn leading to the down sizing of businesses, loss of jobs, reduction in staffs, resource constraints, and increasing economic risk from extreme overdependence on higher-priced imported crude oil prompted SID to refocus on its core energy functions; i.e., energy efficiency, renewable energy and alternate fuels, comprehensive energy planning, and energy emergency preparedness. Consequently the impact of reducing our oil dependence and its consequent price volatility; and attaining a measure of energy security became a pressing goal and even more critical economic activity.

**IV. ALIGNMENT**

Briefly describe how the program's biennium goals are expected to impact DBEDT's nine strategic objectives?	
1.	<b>Hawaii Five Point Economic Plan (tourism marketing/outreach, CIP acceleration, lower fees/taxes, investment attraction/retention, &amp; maximizing Federal dollars)</b> – The State Energy Program's goals supports the Governor's "Five Point Economic Plan" by seeking to increase outreach regarding energy development, investing in improvements to energy infrastructure and state facilities, providing tax credits for clean energy alternatives, attracting private investment in clean energy projects in Hawaii, competing for federal grants, and collaborating where possible.
2.	<b>Hawai'i Clean Energy Initiative</b> – The State Energy Program's goals will use ARRA funds in the biennium, which will help to accelerate the development of HECI and other renewable energy projects by providing funding to "tip" (start) energy projects currently in the pipeline for implementation.
3.	<b>Hawai'i Innovation Initiative (technology development, infrastructure for innovation, STEM education, skilled workforce, emerging industries)</b> – The State Energy Program's goals will assist in creating an emerging clean energy industry along with the development of a skilled workforce to support energy development.
4.	<b>Global Links</b> – The State Energy Program's goals and objectives are to serve as a model and leader in clean energy development, island sustainability, and link to global interest in clean energy development.
5.	<b>Economic research and data analysis</b> – The State Energy Program's goals necessitate access to energy data, statistical, and energy economic analysis for study, as well as, to provide metrics and indicators of performance by the State and industry.
6.	<b>Hawai'i Open for Business</b> – The State Energy Program's goals encourages investments by businesses providing renewable energy alternatives.
7.	<b>Workforce Housing</b> – The State Energy Program's goals will reduce energy costs for workforce housing through policies that encourage residential energy efficiency.
8.	<b>Planning and Land Use</b> – The State Energy Program's goals require permitting of energy projects to comply with all state and county planning and land use statutes or ordinances.
9.	<b>World Class Infrastructure</b> – The State Energy Program's goals seeks to transform Hawaii's energy infrastructure to reflect state-of-the-art clean energy technology.

**YEARLY ACTIVITY PLAN (YAP) - FY '10 & FY'11**

**PROGRAM:** STRATEGIC INDUSTRIES DIVISION

**PROGRAM PURPOSE** To achieve growth, diversification, and long-term stability of the State's economy by facilitating the development of Hawaii industries centered on energy, environmental, and sustainable technology-based products and services; and implementing programs such as: Hawaii's Clean Energy Initiative, Energy Assurance, and Lead By Example efforts.

PROGRAM PRIORITIES	LONG-TERM GOALS (up to six years)	BIENNIUM OBJECTIVES	ACCOMPLISHMENTS FY 2009	
			GOALS SET	ACCOMPLISHMENTS
<ul style="list-style-type: none"> <li>Limit the use and necessary importation of fossil fuels.</li> <li>Fundamentally change how Hawaii consumes energy</li> <li>Enhance and ensure the State's energy security;</li> <li>Develop and utilize more indigenous renewable resources.</li> </ul>	<p><b>Accelerate energy system transformation through the Energy for Tomorrow and Hawaii Clean Energy Initiative (HCEI) to:</b></p> <ol style="list-style-type: none"> <li>Increase energy efficiency;</li> <li>Accelerate the development and adoption of renewable energy resources and technologies;</li> <li>Enhance and ensure energy security;</li> <li>Promote long-term environmental quality; and</li> <li>Ensure and protect consumer interests and benefits.</li> </ol>	<ul style="list-style-type: none"> <li>Maximize energy, environmental, and economic (EEE) benefits through increased collaboration at the federal, State, and community level.</li> <li>Increase market acceptance of energy efficiency and renewable energy technologies, practices, and products.</li> <li>Coordinate private and public sector energy related programs and activities whose purpose serves to preserve the State's energy security;</li> <li>Use innovative approaches to reach market segments and meet policy goals not typically addressed by market-based solutions.</li> </ul>	<ul style="list-style-type: none"> <li>Facilitate and collaborate energy development;</li> <li>Address HCEI policy initiatives;</li> <li>Fulfill State-level energy emergency preparedness requirements;</li> <li>Obtain additional sources of program funds.</li> </ul>	<ul style="list-style-type: none"> <li>❖ <b>Solar Thermal, Electric Growing Quickly in the Islands.</b> Hawaii is the nation's recognized leader in solar water heating, accounting for over one-third of all systems installed in 2008, according to a study by the Solar Energy Industries Association.</li> <li>❖ <b>2009 Legislative Accomplishments In Energy:</b> <ul style="list-style-type: none"> <li>Hawaii's Renewable Portfolio Standard (RPS) brought in line with HCEI; the goal is now 40% renewable electricity by 2030.</li> <li>New Energy Efficiency Portfolio Standard (EEPS) now mandates savings of 4,300 gigawatt-hours of electricity by 2030.</li> <li>State Energy Resources Coordinator now has authority to designate Renewable Energy Zones.</li> <li>Hawaii now one of only a few states to save parking space for electric vehicles—1% of the total spaces of any parking lot with at least 100 public stalls by December 31, 2011. There must also be at least one recharging station in the parking lot.</li> </ul> </li> <li>❖ The State Energy Resources Coordinator is tasked with maintaining the capacity to analyze the status of energy resources, systems, and markets in order to assess the effectiveness of policy and regulatory decisions, and to conduct energy emergency planning.</li> <li>❖ ARRA Grants Awarded: SID awarded \$35,965,296 in ARRA grants. Hawaii-based companies or companies specifically pursuing doing clean energy work in Hawaii awarded over \$59 million in competitive procurements.</li> <li>❖ Hawaii has the highest penetration of Energy Savings Performance Contracts in the United States. The State Energy Program has been a major catalyst for such contracts at the State and County level.</li> <li>❖ The Public Utilities Commission (PUC) is supporting HCEI by considering transformative changes to Hawaii's electricity regulation. Encouraged by HCEI the PUC is deliberating on major changes to how renewable electricity is bought and sold, how electric utilities earn their returns, and how planning for clean energy will proceed. These deliberations are considering the following changes:           <ol style="list-style-type: none"> <li>Feed-in-tariffs;</li> <li>Decoupling;</li> <li>PV Host; and</li> <li>Clean Energy Scenario Planning.</li> </ol> </li> </ul> <p>In addition, these proposed changes continue the progress via the 2008 Energy Agreement between the State and Hawaiian Electric Company (HECO) to address HCEI policy initiatives.</p>

**SUPPLEMENTARY INFORMATION**

**1. Please elaborate on the Challenges the program faces over the current biennium.**

A challenge will be to shift twenty-two positions from federal funds to general funds, which is necessary to support existing PVE funded positions in FY 2011. Without this support the PVE funded program would close down within six months in FY 2011 and the support required for the program and administrative oversight of the federal and ARRA programs would cease and all funds returned to the grantor. A high level of commitment by Administration and legislative leaders to HCEI, and patience with some of the processes, particularly regulatory proceedings, will be required to achieve desired outcomes.

**2. Please elaborate on optional program changes, strategies, leveraging with other efforts, and assistance from other programs that could help this program accomplish its biennium goals.**

To carry out the energy program objectives will require dedicated program funds and staff, which up to now have been predominantly federally funded. Options are to have the state replace dwindling federal resources, or to assess a sliding scale surcharge on imported petroleum to enable transformation to clean energy resources.

**3. Describe efforts to explore additional sources of funding including Federal stimulus grants.**

DBEDT has sought additional sources of funding by applying for both formula and competitive Federal stimulus grants. Four grants totaling \$35,965,296 thus far have been awarded. An additional future award of \$1,112,400 in funds is further expected for the State Energy Program (SEP) - Efficient Appliance Rebate Program. Also, SID recently submitted a proposal of \$10 million in response to a competitive grant opportunity relating to the EECBG block grant for a "Retrofit Ramp-up and General Innovation Fund Program."

**4. Summarize your anticipated 2010 supplemental legislative requests and their relationship to the program's biennium or long term goals.**

The anticipated 2010 supplemental legislative request has not yet been determined, however, it is expected that the request will be developed to be in line with and consistent with the State Energy Program's biennium and long-term goals.