



YEARLY ACTIVITY PLAN (YAP) - FY '09 – FY11

Division/Attached Agency:	Strategic Industries Division
Program Name:	State Energy Office
Program ID:	BED120SI

I. PROGRAM PLANNING

Problem, issue or opportunity statement: Describe the problem, issue and/or opportunity your program is attempting to respond to.

Hawaii is the most petroleum dependent State in the use of petroleum for electricity. It pays the highest electricity prices in the U.S. State energy costs for gasoline are among the highest. Surcharges for fuel have multiplied energy costs throughout 80% of the goods sold in Hawaii. Household fuels and utilities costs rose 36.4%, year-over-year, in the Honolulu Consumer Price Index during the second quarter of 2008. Hawaii's energy costs approaches 11% of its Gross Domestic Product (GDP), whereas in most states energy costs are 4% of GDP. Between 2005 and 2008, state government consumption of electricity increased 3.9%, but expenditures increased 56.8%.

Due to the current economic down turn both locally and nationally, a re-focusing on priorities and fiscal restraint have impacted operations. Increasing economic risk from extreme overdependence on higher-priced imported crude oil has prompted support of SID's refocus on its core energy functions; i.e., energy efficiency, renewable energy and alternate fuels, comprehensive energy planning and energy emergency preparedness.

Consequently, reducing our oil dependence and its consequent price volatility; and attaining a measure of energy security is critical.

The federal government energy programs increasingly rely on state governments to deploy advanced energy technologies. Export and domestic markets for these technologies continue to grow. Alternative energy is a recognized growth sector for Hawaii.

Need and partners: Provide quantitative evidence to show the scope and nature of the problem or opportunity you are working on. Identify partners you will be working with to address the problem, issue and/or opportunity. Describe why government should be part of the solution.

Since the success of HCEI also depends other state departments, Hawaii's county governments, and a broad set of non-governmental parties, the program must also include outreach and technical assistance external to DBEDT. SID will therefore develop plans and programs to assist these external constituencies. However, SID will require adequate resources to fully execute HCEI.

HCEI requires the technical capability and adequate capacity to quantitatively and qualitatively evaluate, analyze, develop, and coordinate implementation of private and public sector energy planning efforts, and recommend market-based policies to develop Hawaii's energy systems and resources in all sectors. Among State agencies with major energy functions – Public Utilities Commission (PUC), Consumer Advocate (CA), and DBEDT-State Energy Resources Coordinator (ERC) – the Legislature established the State ERC (DBEDT Director) to ensure this is accomplished in a cost-effective, and sustainable way, while preserving and protecting the state's energy security.

SID is intervening in appropriate PUC's regulatory activities to advocate for HCEI policy positions, as approved by the Governor. Although the CA represents the consumer, the ERC represents the State and its broader, strategic policy perspectives to coordinate and manage statewide energy resource development. The ERC needs the capability to carefully consider and analyze the status of Hawaii's energy systems, because a technically informed energy industry also uses analytic arguments and

YEARLY ACTIVITY PLAN (YAP) - FY '09 – FY11

rigorous "due process" channels to resist certain policy-making and implementation.

Hawaii's oil dependence and transitional issues cited above underscore the need for industry and government to coordinate contingency plans to contend with energy disruptions, irrespective of cause. The State's energy emergency preparedness program also remains a priority EPPB function. Partners include all of Hawaii's major energy companies, all levels of government, and State Civil Defense.

Government and industry partnerships work best when both partners are equally informed on technical and economic feasibilities of energy options. When facing energy emergencies in which both government and industry have critical roles and responsibilities, a variety of energy data and the capability to analyze it is particularly essential to define the magnitude, scope and estimated duration of the emergency energy disruption and to determine whether and to what extent any government intervention may be warranted and appropriate.

Desired results (outputs, outcomes and impacts): What will success look like? Describe what you expect to achieve in the short-term (0-2 years) and long-term (2-6 years).

State Energy Office Key Objectives and Metrics for Success - 2009

End Use Efficiency

- Work with PUC to establish EEPS; Set meaningful goals and measurable outcomes. Scoping in spring 2009, development of M&V metrics in spring-summer 2009.
- Work with counties and State Building Code Council to have IECC 2006 code adoption completed by each county.
- Work with NREL to develop building code amendments for IECC 2009.
- Work with DHHL to plan a net zero energy homes community.
- Work with appropriate entities to establish a Waikiki Hotel Project to bring at least 10 hotels to Energy Star status.
- Assist DAGS and other state agencies to drive a decrease in state energy consumption of at least 1.5% a year.
- Work with PUC and PBFA as appropriate to assist in program alignment and development.
- Work with Office of Community Services to develop a program to install solar water heaters on every eligible low income or affordable housing unit technically appropriate.
- Develop and implement with a broad set of coalition members to establish an outreach campaign for efficiency.

Electricity Generation

- Intervene in the PUC feed-in tariff docket and work with the parties on the best design and timely implementation. Ensure the adoption of feed-in tariffs with transparent utility procurement and interconnection standards and processes.
- Intervene in the PUC decoupling docket and work with the parties on the development of a reasonable mechanism for the HECO utilities that ensures consumer protection, effective cost management by the utilities, and promote increased energy efficiency and use of renewable resources by the utilities.
- Facilitate the completion of all grid models and scenario planning assumptions for the undersea cable and integration of non-firm generation.
- Voluntary agreement implemented to maximum extent possible in one year; targets set for end-year one achieved.
- Complete voluntary agreement with KIUC.
- Intervene and participate in the PUC docket on the development and implementation of the Clean Energy Scenario Planning and ensure the timely adoption and process implementation.
- Renewable energy program established.
- Renewable energy project facilitation program developed.
- Voluntary agreement implemented to maximum extent possible in one year; targets set for end-

YEARLY ACTIVITY PLAN (YAP) - FY '09 – FY11

year one achieved.

- Clean energy scenario planning process in place.
- Renewable Energy Facility Siting Process established.
- At least two Smart Grid pilots in progress.
- Completion of greenhouse gas reduction work plans in accordance with SLH 2007 Act 234.

Transportation Energy

- Electrification plan for at least one community in Hawaii established, including subgroups.
- Develop robust data collection process in conjunction with counties and Dept of Transportation.
- At least one biofuel/algae pilot announced.
- Complete bioenergy master plan, with recommended legislative and executive action.

Energy Emergency Planning

- Coordinate SID Shortage Management Center staff training of Hawaii Energy Emergency Preparedness Plan, and ensure compliance with National Incident Management System critical training.
- Complete Emergency Support Function #12 (Energy) input into the FEMA/SCD Hawaii Catastrophic Hurricane Planning Initiative for the landing of a category IV hurricane on South Oahu.
- Exercise Emergency Support Function #12's coordination role per the soon-to-be-developed Operations Plan during the annual Makani Pahili 2009 Statewide Hurricane Exercise.
- Work with the counties to support integration of their energy emergency planning with state and federal plans.
- Provide professional and technical staff support to Hawaii State Energy Council member organizations.

Influential Factors: List the factors you believe will support or hinder your ability to impact the problem or opportunity.

1. Approval of funding for the reorganization of SID, and leadership concurrence with proposed approach and work plan.
2. Adequate resources commensurate to scope, nature and long-term duration of work to be done, especially establishing positions and funding required to complete the programmatic responsibilities assigned by the Governor and Legislature.
3. Level of commitment by Administration and legislative leaders to HCEI, and patience with some of the processes, particularly regulatory proceedings, which will be required to achieve desired outcomes.
4. Continued support from Federal entities such as the Department of Energy and Department of Defense.
5. Favorable regulatory climate for reform of long-standing regulatory framework, transitioning to a renewable-based framework.
6. Feasibility to significantly improve level of trust afforded to, belief in the mission and relative priority of the program by watchdog agencies, especially Department of Budget and Finance. Absent this necessary shift, this becomes a potential "show-stopping" influential factor.
7. Assumed conditions of a world oil market and that projected high oil price trends continue.

Strategies: List the "best practices" that have helped other programs achieve the kind of results your program promises.

The key approach to success of the State Energy Program is leveraging the HCEI construct and partnerships to maintain the pace of progress of change. Execution of the program is based on comprehensive and integrated coverage of all energy sectors, and technical depth and detail to identify the most potent policy "levers" – changes and new initiatives – to influence and produce the targeted outcomes and results. For example, recognition of how the energy industry's – particularly regulated

YEARLY ACTIVITY PLAN (YAP) - FY '09 – FY11

utilities – avoidance of risk exposure to high and volatile oil price had become complicatedly integrated into state energy policy due to Hawaii's primarily oil-based energy systems. HCEI incorporated policy initiatives requiring coordinated legislative, administrative, and regulatory actions to break these oil-based policy linkages, as well as incentives to reward private sector investments and actions in favor of energy efficiency, indigenous renewable energy resources, and sharing the risks of oil dependency rather than just consumer pass-through.

SID will continue to offer the analytical basis to state leadership, bolstered by the solid data & statistics-based and technical policy analytic work. Energy systems and policy analyses at this technical level of detail and integration are a strategy SID will continue to use to support implementation activities, assuming restoration of adequate resources. Equally important was the coordination and consensus-building strategy, used to obtain broad-based support for significant changes to standing energy policies, which SID also plans to apply.

Assumptions: State the assumptions behind *how* and *why* the change strategies you have identified will work. Use 'If - then' statements, i.e. "if _____ then _____ happens."

1. Approval of funding for the purposes described below, and leadership concurrence with proposed approach and work plan.
2. Adequate resources commensurate to scope, nature and long-term duration of work to be done, especially in obtaining adequate staffing and funds to complete assigned initiatives.
3. Level of commitment by Administration and legislative leaders to EFT, and patience with some of the processes, particularly regulatory proceedings, which will be required to achieve desired outcomes.
4. Favorable regulatory climate for reform of long-standing regulatory framework, which supported rigid avoidance of oil price-induced risk by regulated energy utilities.
5. Feasibility to significantly improve level of trust afforded to, belief in the mission and relative priority of the program by watchdog agencies, especially Department of Budget and Finance. Absent this necessary shift, this becomes a potential "show-stopping" influential factor.
6. Assumed conditions of a world oil market and that projected high oil price trends continue.

YEARLY ACTIVITY PLAN (YAP) - FY '09 – FY11

II. PROGRAM IMPLEMENTATION

Resources: Describe the resources available to support your program.

1. Coordinate implementation of EFT – key resource/support needs for priority outcomes:

Regulated Energy Sector

- a. **Need:** Outside counsel to help analyze, develop testimonies.
- b. **Need:** Credible expert witnesses.
- c. **Need:** Consultant support for in-house staff.
- d. **Need:** Adequate in-house technical and data-based analytic staff capability.
- e. **Need:** Legal representation.

Biofuels Sector

- a. **Need:** Adequate in-house technical and data-based analytic staff capability.
- b. **Need:** Consultant support for in-house staff.

Renewable Energy Program

- a. **Need:** Consultant support for program implementation.
- b. **Need:** Consultant or technical investment and advisory support for renewable hydrogen capital investment fund.

2. Private and public sector energy related programs and activities whose purpose serves to preserve the State's energy security, including:

Energy Emergency Preparedness

- a. **Need:** Conduct up-to-date energy security and fuels vulnerability analysis; resolve deficiencies identified in 2006 EEP programmatic review and update; e.g., propose amendments to Chapters 125C and 196, HRS.
- b. **Need:** Restore ability to obtain and manage, and interpret critical energy data changed through Act 78, SLH 2006. Although Act 182, SLH 2007, Section 486J-A (i.e., one (1) sentence section), clarified and directed DBEDT conduct energy analyses with data received pursuant to Chapter 486J, HRS, to effectuate purposes of HRS Chapters 125C, 196, and other relevant laws. Specified purpose and use of data/information by DBEDT/State ERC should be added Chapters 125C, 196, HRS, and funds/staff needed to address deficiencies. Definitive policy guidance needed on the nature and relationship of energy data analyses to State's energy program (DBEDT), and to clearly delineate distinctive analytic roles & responsibilities of State agencies conducting energy data functions.

3. Establish in-house capability and function to systematically conduct quantitative and qualitative technical analyses complex, integrated energy system and markets, and unbiased analysis, using data and information to recommend, develop proposals for, and assess the effectiveness of policy and regulatory decisions, conduct energy emergency planning, and assessments of renewable energy, energy efficiency, and fossil fuels in all sectors.

- a. **Need:** Restore capability for energy data and analysis lost with transfer of gas cap function to PUC.
- b. **Need:** In-house capacity for design, collection, interpretation and analysis of broad spectrum energy data.
- c. **Need:** PUC position development, fuels planning and emergency management (HRS 125C, 196, and 486J).

YEARLY ACTIVITY PLAN (YAP) - FY '09 – FY11

Activities: Describe each of the activities you plan to conduct within your program.

The State Energy Office activities will focus on utilizing American Recovery and Reinvestment Act (ARRA) funding for on-going and shovel-ready energy projects, which will invest in and advance Hawaii's energy future. These activities will encompass energy efficiency use, electric generation, transportation energy, and energy emergency planning.

Outputs: For each program activity, identify what outputs you aim to produce.

The State Energy Office will seek to produce the following outputs from pursuing ARRA funding activities:

1. Invest in priority energy projects, which will advance Hawaii's clean energy objectives and goals;
2. Meet the criteria for securing ARRA funds directed to our office;
3. Successfully compete for competitive funding opportunities;
4. Facilitate the coordination and communications of funding opportunities and project initiation; and
5. Demonstrate transparency and accountability for expenditures.

Outcomes: Identify the short-term (0-2 years) and long-term (2-6 years) outcomes you expect to achieve.

Use of ARRA funds, require projects to be fast-tracked. Therefore, in the short-term ARRA funded projects specify that:

- (1) Contract encumbrances are required no later than September 30, 2010; and **that in the long-term:**
- (2) Projects need to be completed no later than March 31, 2012.

Impact: Describe the lasting impact you anticipate.

- Achieve a 70% clean energy economy for Hawaii within a generation
- Increase Hawaii's security
- Capture economic benefits of clean energy for all levels of society
- Foster and demonstrate innovation
- Build the workforce of the future
- Serve as a model for the US and the world

III. PROGRAM EVALUATION

Indicators: Describe what SMART ('specific; measurable; action-oriented; realistic; and timed') indicators can be collected that would convey the status of your program.

- renewable energy generated
- efficiencies achieved, as measured by energy intensity (energy use per capita and per economic output unit)
- renewable projects facilitated
- non-state funds generated for the state's energy system (federal and private funding)

IV. ALIGNMENT

YEARLY ACTIVITY PLAN (YAP) - FY '09 – FY11

Is your program linked to DBEDT's six strategic objectives?		
1.	X	Hawaii Five Point Economic Plan
2.	X	Hawai'i Clean Energy Initiative
3.	X	Hawaii Innovation Initiative
4.	X	Global Links
5.	X	Economic Research and Data Analysis
6.	X	Hawaii Open for Business
7.		Workforce Housing
8.	X	Planning and Land Use
9.	X	World Class Infrastructure

Emerging Industries: Does your program impact Hawai'i's emerging industries?	Yes	X		No	<input type="checkbox"/>
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V. APPROVALS

- a. _____ Submitted by - Print Name _____ Submitted by - Signature _____ Date
- b. APPROVED DISAPPROVED _____ Division/Agency Head - Signature _____ Date
- c. APPROVED DISAPPROVED _____ Director - Signature _____ Date