

2008 Innovations Awards Program APPLICATION

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ID # (assigned by CSG): 08-W-11HI

Please provide the following information, adding space as necessary:

State: Hawaii

Assign Program Category (applicant): Natural Resources - Energy (Use list at end of application)

1. Program Name: Photovoltaic Energy Systems for Hawaii Statewide Airports
2. Administering Agency: State of Hawaii Department of Transportation Airports Division
3. Contact Person (Name and Title): Jeffrey Chang, Engineering Program Manager
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7. E-mail Address: jeff.chang@hawaii.gov
8. Web site Address: <http://www.state.hi.us/dot/airports/index.htm>
9. Please provide a two-sentence description of the program. Agreement with a Photovoltaic (PV) Systems Developer to install maintain, operate and sell power to the State of Hawaii, using airport locations, under a 20 year Power Purchase Agreement (PPA). The first Request for Proposals (RFP) resulted in award of a contract to develop 12 MW of power at 12 sites where the PV developer will sell the power to the State at a fixed cost for 20 years below current utility rates and independent of oil prices. At 2 locations enough power is produced to run the entire airport.
10. How long has this program been operational (month and year)? Note: the program must be between 9 months and 5 years old on March 1, 2008 to be considered: Development of the RFP began on June 1, 2008, systems will be installed and operational by 12/31/08.
11. Why was the program created? What problem[s] or issue[s] was it designed to address? To stabilize utility costs for the Hawaii's airport system. With rising oil prices programmed budgets to pay for electricity were inadequate and funds needed to be rearranged from other important programs. It is also difficult to create future budgets because of the volatility and unpredictability of oil prices.
12. Describe the specific activities and operations of the program in chronological order. 1) Let out RFP, 2) Contract with vendor, 3) Vendor builds systems, 4) State buys power from Vendor for 20 years. This process can be replicated for any other government agency now that the RFP, PPA and contracting format have been established.
13. Why is the program a new and creative approach or method? First project of its kind in Hawaii for a government agency and one of the largest in the nation.
14. What were the program's start-up costs? (Provide details about specific purchases for this program, staffing needs and other financial expenditures, as well as existing materials, technology and staff already in place.) \$100,000 to develop the RFP and PPA.
15. What are the program's annual operational costs? \$0
16. How is the program funded? Initial funding from legal services budget.
17. Did this program require the passage of legislation, executive order or regulations? If YES, please indicate the citation number. No, however 30% Federal and 35% State tax credits for alternative energy

investments make the program economically feasible. Hawaii State Act 96 encourages these types of alternative energy initiatives and endorses such programs.

18. What equipment, technology and software are used to operate and administer this program? State of the art photovoltaic equipment monitored via a web based system.

19. To the best of your knowledge, did this program originate in your state? If YES, please indicate the innovator's name, present address, telephone number and e-mail address. No.

20. Are you aware of similar programs in other states? If YES, which ones and how does this program differ? Yes, there are similar programs in California. This program is similar but one of the few where the agency does not own or lease the PV system. It will be replicated by many other Hawaii State agencies.

21. Has the program been fully implemented? If NO, what actions remain to be taken? Construction will begin within 2 months and the systems fully operational by 12/31/08

22. Briefly evaluate (pro and con) the program's effectiveness in addressing the defined problem[s] or issue[s]. Provide tangible examples. Accomplishes the goal of low and stable electrical costs for 20 years at no cost to the State. No cons.

23. How has the program grown and/or changed since its inception? It will grow as other State agencies follow the RFP and PPA model and template.

24. What limitations or obstacles might other states expect to encounter if they attempt to adopt this program? Availability of tax credits for alternative energy development.