



YEARLY ACTIVITY PLAN (YAP) - FY '08

Division/Attached Agency: High Technology Development Corporation

Program Name: Hawaii Center for Advanced Transportation Technologies (HCATT)

Program ID: BED 143

I. PROGRAM PLANNING

Problem, issue or opportunity statement: Describe the problem(s), issue(s) and/or opportunity(ies) your program is attempting to respond to. Identify the participants (individuals, companies, industry sectors, etc.) engaged in this problem, issue and/or opportunity.

HCATT is a federally funded program established to develop and demonstrate advanced transportation technologies for both military and commercial applications. Department of Defense (DOD) is the largest user of petroleum among federal agencies; Air Force is the largest user in DOD. Air Force is mandated and driven to seek alternative energy solutions and established the National Demonstration Center for Alternative Fuel Vehicles at Hickam Air Force Base to facilitate demonstration/validation of the latest fuel efficient and environmentally compliant technologies for use in vehicles and ground support equipment. HCATT was selected to develop these technologies and manage the Center at Hickam. The hydrogen production and fueling station established at Hickam serves as a model of other Air Force installations. The Volcanoes National Park now seeks support from HCATT to introduce fuel cell tour buses into the park. Volcanoes desires to emulate Hickam's role in the Air Force and be the model agency in the National Park Service (NPS) for utilizing fuel cell vehicles and the supporting hydrogen infrastructure.

Need and partners: Specify the need for government intervention. Provide supporting evidence. Identify any partners you will be working with to address the problem, issue and/or opportunity.

Need:

HCATT is a federally funded program placed within a State agency; government is involved by design. Federal agencies/installations mandated to reduce emissions and dependence on imported petroleum. Air Force and NPS seeking lead in Hawaii in use of hydrogen and fuel cell vehicles. Renewable energy sources required to power equipment and reduce fossil fuel dependence.

Partners:

Air Force/State partnership formed to develop alternative fuel technologies for transportation. HCATT/Hawaii Natural Energy Institute (HNEI)/Volcanoes National Park partnership formed to introduce fuel cell tour buses and supporting hydrogen infrastructure into the national parks.

Desired results (outputs, outcomes and impacts): Identify desired results, what success will look like, by describing what you expect to achieve near (0-2 years) and long-term (2-6 years).

Outputs: (near term)

Sustaining hydrogen production and vehicle refueling operations, including introduction of renewable energy.

Technology demonstrations.

Additional zero and low emission vehicles at Hickam.

Two prototype fuel cell tour buses operating in Volcanoes National Park.

Outcomes: (near term)

Model systems for worldwide deployment.

Commercialization of advanced technology products.

Renewable hydrogen production.

Impact: (far term)

Less demand for imported oil.

Energy security and independence.

Note: This form was created using the W. K. Kellogg Foundation Logic Model Development Guide, January 2004.

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Reduction in pollution from vehicle emissions.

Influential Factors: List the factors you believe will influence your ability to impact the problem or opportunity. (Things that support success and barriers to success.)

Congressional support.
Federal funding.
Air Force Secretary level interest in program.
Funding agency - Air Force Advanced Power Technology Office (APTO) motivation.
Willing participation by users and operators at Hickam AFB.
Volcanoes National Park motivation to introduce zero emission tour buses.
Manufacturers' willingness to participate.
State of technology.
State contracting/procurement policies.
Cost share requirement.

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

Demonstrate technologies under real life mission scenarios.
Establish technology developer/operator cooperation to support future product acquisition.
Maintain readily available maintenance/service support (local) throughout.
Build upon successful technology demonstrations; don't "reinvent the wheel" with each new project introduction.

Assumptions: State the assumptions behind *how* and *why* the change strategies you have identified will work.

HCATT has history of successful technology demonstration projects.
Hickam AFB (15th Airlift Wing) will continue to conduct operational testing.
Congressional funding support will continue (near term).
APTO will secure program funding under Administration's budget (far term).
NPS, Department of Interior, and Department of Transportation (DOT) have expressed support for fuel cell bus initiative at Volcanoes National Park.
DOT research funds are available to support NPS project.

II. PROGRAM IMPLEMENTATION

Resources: Describe the resources or influential factors available to support your program.

Federal funds, HCATT Facility and equipment, contractors, APTO, Hickam AFB/15th Airlift Wing, HNEI support, Volcanoes National Park

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

Coordination with congressional staff.
Solicit/review white papers and proposals.
Generate project list.
Brief Federal Projects Committee.
Draft contracts.
Collect data.
Conduct program reviews; monitor project progress.

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

Proposals, contracts, reports, presentations, infrastructure, technology demonstrators.

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

This is a complex program comprised of many transportation related technology projects, each with its own outcome relative to an expected performance, measured by contract deliverables. The final deliverable under each project may be an end item in and of itself or a subset of a larger initiative. Examples of typical outcomes for both the short and long terms follow.

Short term:

Model systems, zero-emission vehicles, multi-agency collaboration.

Long term:

Acquisition-ready products, cost reductions for advanced technologies, sustainable infrastructure.

Impact: Describe the lasting impact you anticipate.

State of Hawaii, Hickam AFB, and Volcanoes National Park are recognized leaders in hydrogen powered fuel cell vehicle operations; energy security; reduced dependence on imported petroleum; accelerated market introduction; support for renewable hydrogen economy.

III. PROGRAM EVALUATION

Focus Area: From your program logic model, list the components of the most important aspects of your program.

Technologies, outcomes.

Audience: Identify the key audiences for each focus area. Who has an interest in your program?

Federal funding agencies, contractors, vehicle/technology operators/evaluators, HCATT staff.

Questions: For each focus area and audience, list the questions they may have about your program.

Does technology meet performance specifications?

Was adequate funding provided?

Did we effectively target local companies?

Is the deliverable production quality?

Is there commercial application?

Were technical objectives/goals met?

Information Use: For each audience and question you have identified, identify the ways you will use the evaluation information.

Future directions

Budget planning

Workforce development

Procurement decisions

Production decisions

Program adjustments

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Indicators: Describe what information can be collected that would convey the status of your program.

- Vehicle and equipment performance reports.
- Operator surveys.
- Engineering assessments.
- Number of cost overruns.
- Number of local participants.
- Survey of available participants.
- Manufacturing standards.
- Number of potential customers.
- Industry surveys.
- Management analyses.

IV. ALIGNMENT

How is your program linked to DBEDT's six strategic objectives? <i>(examples)</i>		
1.		Workforce Housing
2.	X	Workforce Development <i>(HydraFLX intern program)</i>
3.	X	"Energy For Tomorrow" <i>(Fundamental aspect of entire program)</i>
4.	X	"Global Links/Export of Goods and Services" <i>(HHC exports)</i>
5.	X	The Creation Of An "Innovation Infrastructure" <i>(Hydrogen infrastructure)</i>
6.		Improve Hawaii's Small Business Environment

If your program is not linked to any of the six objectives, explain why it is still important.