



YEARLY ACTIVITY PLAN (YAP) - FY '08

Division/Attached Agency: Natural Energy Laboratory of Hawaii Authority

Program Name:

Program ID: BED 146

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.

Problems:

1. We have earthquake severed deep sea water pipelines that must be repaired in order to continue consistent deliveries to commercial tenants.
2. We must continue the movement toward operating self-reliance.
3. We have a lack of developable land (being down to just three sites that can be leased).
4. We have out of control energy costs.

Participants in the problems:

1. The FEMA, NOAA, HCD, DBEDT, SPO, commercial contractors are involved in solving the earthquake damage problem.
2. This is a problem created by a previous Administration and neglected for a decade. To solve it requires participation by the Board of Directors, Legislature, Administration, and tenants.
3. Subdividing remaining land is extremely complex and involves, among others, DWS, County of Hawaii, State Planning Office, Land Use Commission, EPA, NOAA, FAA, KOA, neighboring land developments, and the community.
4. The world and its hunger for energy, energy producing nations, HELCO, tenants expecting subsidization of their operating costs.

Opportunities:

1. NELHA should take a leadership role in developing renewable energy resources --- back to its roots.
2. An imperative is achieving operating profitability to secure the future of the agency.
3. NELHA should promote research on the constituents of the deep sea water to produce new medicines and cures for mankind.
4. NELHA has a statewide authority in its statute; its operations should be extended to other islands in order to promote their economies.

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.

Three likely partners:

1. Private companies that are willing to invest funds into NELHA energy projects. These may be investment banking firms, corporations wanting to demonstrate their technologies, or groups that determine there exists a profit-making opportunity be so doing.
2. Government departments that need NELHA's unique assets or services to accomplish their renewable energy goals. These may include Federal agencies such as DoE, DoD, NOAA, NASA or state agencies such as DOT, FTZ and the like.
3. Government/private groups that desire access to NELHA's unique assets for research or other purposes such as NIH, DoD, DoE, UH, other educational entities and institutions such as the DoH and the County of Hawaii for improved water quality standardization purposes.

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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).

Desired results in the next two years:

1. Repair severed pipelines and restore full service capability to deliver sea water for tenant usage.
2. Achieve total self-reliance for operating expenses through execution of higher yielding leases, continued ramping up of seawater delivery prices to reflect actual costs, and the development of independent revenue sources such as water laboratory services, and the delivery of energy services to others.
3. Issuance of RFPs and subsequent contracts for a large solar array project that would supply both NELHA and KOA with at least intermittent power, therefore relief from the grid.
4. Issuance of RFP and subsequent contract for construction of a scale-up ocean thermal energy plant (OTEC), which materially would aid in proving the economic feasibility of establishing such plants elsewhere (at commercial size) for the benefit of Hawaiian electricity consumers. This could also create a NELHAcentric (yes, it is a new word) revenue base.
5. Issuance of, and funding for, an RFP for construction of the vital airport connector road, enabling ingress to the largest section of undeveloped NELHA real estate.
6. Create the "NELHA" brand as a unique product source. Recent developments in deep sea water branding have shown the need to brand NELHA products for their recognized exclusivity.

Desired results in the 2 to 6 year time period:

1. Restore Hawaiian leadership in OTEC development through leadership, not talk.
2. Achieve energy independence through privately-financed alternative power projects at NELHA.
3. Have a multiplicity of Hawaiian operations throughout the state, not just at Keahole Point.
4. Have at least one on-going partnership to construct, operate and profit from OTEC plants in various locations.
5. With the remaining 502 acres having completed the arduous subdividing, permitting, and platting process, lease these lands at their highest and best use prices to assist in attaining operating expense self-reliance.

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.)

Positive influential factors:

1. An administration and legislature committed to energy independence for the state and its agencies.
2. Rising fossil fuel prices.
3. A vigorous board of Directors not burdened by past events and that is forward-looking and self-reliant directed.
4. Increasing public awareness of high energy prices and that it is within the state's ability to "do something about them".
5. New tenants who do not believe paying market rates for leases and sea water deliveries is unreasonable to expect. These new tenants also have business models directed toward more lucrative products than do many existing tenants.
6. Increasingly, a local community interested and concerned about the lack of well-paying jobs and a diversified economic base.

Negative influential factors:

1. Current laws and regulations regarding the transmission, distribution and charging for electricity deliveries.
2. A lack of funding to construct and operate energy self-sufficiency projects, resulting in the need to engage private enterprise to fulfill this function for NELHA.
3. Existing tenants expecting a continuation of the traditional subsidization that they have received in terms of less-than-cost seawater deliveries and substantially-less-than-cost land rents.
4. Non-local interest groups, such as some supposed environmental groups that oppose any type of

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progress or development for their own pecuniary purposes.

5. An Environmental Impact Statement dating from the early 1980's and a 1990's Master Plan that restrain modern development, particularly on the HOST Park acreage.

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

There are no other programs in Hawaii similar to NELHA, therefore it is in the unique position of leading the way into the future for state agencies to become self-sustaining and operating as if they were privately run companies.

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

1. Current tax laws favor alternative energy development and there is considerable interest in helping NELHA and the state become more self-sufficient through public/private partnerships.
2. Tenants locate at NELHA to have access to the seawater they need to grow and manufacture products. New tenants have signed leases in the past year at Board-established market rates for farming purposes --- generally 5 times more than current existing tenants are paying. Tenants must therefore adjust their business models to factor in the higher prices for NELHA's water and land or cease operations.
3. A collapse of the local tourism and construction economy will create public interest in diversifying the economy of west Hawaii, NELHA is the logical place for this to occur as it has land, FTZ status, and a mandate in favor of such.

II. PROGRAM IMPLEMENTATION

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

A variety of resources now are available to assist in goal achievement:

1. \$1.3 million Special Fund reserve
2. Legislative support of, and interest in, the NELHA programs as evidenced by Capital Improvement Project funding appropriated by the Legislature in the past two years.
3. World energy conditions
4. Substantial amounts of land available for leasing after the planning, permitting, E.I.S., and other steps are completed.
5. Excellent dedicated staff, with new personnel eager to achieve goals and create positive results for the benefit of the people of Hawaii.
6. A revamped Board of Directors that understands the need for progress, not status quo.
7. The world's only 3,000 foot deep sea water source --- the envy of many nations and companies.

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

These activities create agency leadership position:

1. Issue RFPs for the private development of up to 5 megawatts of solar power at NELHA.
2. Issue a RFP for the private development of an OTEC scale-up plant at NELHA.
3. Issue RFP for planning and design of an expansion to the 55" pipeline system to facilitate future tenants and alternative uses of sea water, such as air conditioning.
4. Pursue new Master plan completion.
5. Develop in-house independent revenue bases such as water quality laboratory work for others and consulting and/or involvement in development of energy projects for other state and governmental

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entities.

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

Leadership through example and independent action:

1. Contract for the private development of up to 5 megawatts of solar power.
2. Contract for construction of a 1 megawatt OTEC plant.
3. Increased and expanded delivery capabilities that will result in the ability to sell "cold" and create secondary uses for the seawater.
4. Place NELHA in the position of being able to commence labor on the subdividing, planning, and permitting of nearly 300 acres of land for future businesses and development.
5. Render NELHA more self-reliant and less reliant on tenant revenue sources.

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

Desired results in the next two years:

1. Repair severed pipelines and restore full service capability to deliver sea water for tenant usage.
2. Achieve total self-reliance for operating expenses through execution of higher yielding leases, continued ramping up of seawater delivery prices to reflect actual costs, and the development of independent revenue sources such as water laboratory services, and the delivery of energy services to others.
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6. Create the "NELHA" brand as a unique product source. Recent developments in deep sea water branding have shown the need to brand NELHA products for their recognized exclusivity.
7. Promote at least one company into researching and developing mew medicines from the sea.

Desired results in the 2 to 6 year time period:

1. Restore Hawaiian leadership in OTEC development through leadership, not talk.
2. Achieve energy independence through privately-financed alternative power projects at NELHA.
3. Have a multiplicity of Hawaiian operations throughout the state, not just at Keahole Point.
4. Have at least one on-going partnership to construct, operate and profit from OTEC plants in various locations.
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Impact: Describe the lasting impact you anticipate.

There are a number of important impacts achievable by following this plan to a successful culmination:

1. Become a leader for proving that some state agencies can be profit centers for the benefit of the people of Hawaii.
2. Become the leader in Hawaii showing how to utilize alternate energy, benefiting the people and

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- state.
3. Provide a location for the research and development of new energy resources of the benefit of the state's citizens.
 4. Through bringing research into sea water medicines, be the world leader in facilitating the development of new medicines for the benefit of all mankind.

III. PROGRAM EVALUATION

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

There are several:

1. Contracts
2. Perseverance in striving to self-reliance
3. Promotion and delivery of positive results

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

A disparate number of audiences exist, depending upon their interests:

1. Potential and existing tenants
2. The administration and its departments
3. The Legislature and its committees
4. The immediate community and the larger state population
5. Various Federal, state, and local governmental entities (i.e., FAA, DoD, DoE, County of Hawaii)
6. Private investment institutions that could be enticed to invest in NELHA infrastructure
7. Increasing numbers of foreign countries interested in replicating or surpassing NELHA's accomplishments and potential achievements, particularly in the use of sea water and ocean energy.
8. Developers of nearby projects ranging from airport utilization to workforce and affordable housing

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

These are as varied as the disparate groups themselves: (typical ??s)

1. How much does the water cost, how much is it going to cost, how much does the land cost?
2. What is NELHA doing about becoming more self-reliant? Why does it not act like other state departments and go with the tide?
3. Why does NELHA raise its prices? What can the Legislature do to help NELHA achieve its goals? Why has NELHA not yet implemented its C.I.P.'s that have been appropriated?
4. What is NELHA doing to create higher paying jobs? Is NELHA allowing GMO work? Why hasn't NELHA built an OTEC plant to demonstrate how to reduce our electricity costs? What is NELHA doing about -- or to -- the environment?
5. What is that coverall going up at NELHA? Why is NELHA not energy self-sufficient? What is NELHA doing about energy self-sufficiency? Why does NELHA has so much traffic in and out?
6. Why does NELHA have to go through the RFP process --- why can't it move faster?
7. Why hasn't OTEC been built? Can you help us (for free or a fee) replicate what NELHA has achieved for the benefit of our people?
8. How can we direct our traffic through NELHA? Why hasn't NELHA built the airport connector road? Can we buy "cold" from NELHA? Is NELHA going to continue to allow expansion of tenant or new

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tenant operations? What are you or what can we do together to get more potable water allocations?

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

Each audience would benefit from understanding:

1. NELHA's mission
2. NELHA's goals and objectives
3. What NELHA intends to do in fulfilling its mission, goals and objectives
4. Provide copies of the YAP to each inquiry

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

There are many:

1. Financial results showing progress toward self-reliance
2. Progress status toward consummation of RFP's
3. Progress toward energy self-sufficiency
4. Public awareness of NELHA and its role
5. Interest by foreign entities in what is going on at NELHA
6. Interest by various U.S. government agencies as to what is going on at NELHA
7. New tenancies being established (once land is subdivided)
8. Number of new documentaries or videos made about activities at NELHA
9. Number of requests by foreign groups to visit NELHA
10. Interest by energy groups in visiting NELHA, working with NELHA, soliciting NELHA's advice on projects

IV. ALIGNMENT

How is your program linked to DBEDT's six strategic objectives?		
1.		Workforce Housing
2.	X	Workforce Development
3.	X	"Energy For Tomorrow"
4.	X	"Global Links/Export of Goods and Services"
5.	X	The Creation Of An "Innovation Infrastructure"
6.	X	Improve Hawaii's Small Business Environment

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



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It should be intuitively obvious that comfortable, affordable, pleasant, and safe workforce housing is vital to the creation and stability of a trained and willing labor force in Hawaii. The problem could quite easily be solved by copying some programs on the mainland rather than attempting to re-invent the wheel, so to say. Look, for example, at how Los Angeles solves affordable housing for \$50,000 or so per house.