November 30, 1990

MEMORANDUM

TO: The Honorable John Waihee
    Governor, State of Hawaii

FROM: Roger A. Ulveling

SUBJECT: Recommendations from the November 20 and 21, 1990
         Geothermal Planning Workshop

The Directors of Health; Land and Natural Resources;
and Business, Economic Development & Tourism, their staffs, the
Chairman of the Governor's Advisory Board on the
Geothermal/Cable Project, Susumu Ono and a representative from
the Office of State Planning and from the University's Hawaii
Institute of Geophysics held a geothermal planning workshop on
November 20 and 21, 1990, to discuss broad issues relating to
Hawaii's geothermal program. A list of attendees is attached.

One full day was devoted to presentations from the
Directors of DBED, DLNR and DOH, the Executive Director of the
Natural Energy Laboratory of Hawaii Authority, HECO's Vice
President for Engineering, the Project Manager for the
Scientific Observation Hole program, and the two private
developers in Hawaii. Summaries of their presentations are
attached.

One half day was devoted to discussion of the major
issues. A summary of these discussions is attached.
Following are more important recommendations resulting from the workshop:

- DBED draft, for the Governor's consideration, a bill to create a Renewable Energy Authority.
- DOH develop hydrogen sulfide ambient air quality standards based on health rather than nuisance.
- DOH develop statewide generic noise regulations. In the interim, DOH assist counties with noise enforcement.
- DLNR meet with the new County of Hawaii administration to discuss long term funding for the Asset Fund.
- The County of Hawaii, if they so wish, take the initiative for legislation to share geothermal royalties with the State.
- DLNR meet with the new County of Hawaii administration to develop more flexibility in siting exploration wells and a position on wells outside Geothermal Resource Subzones.
- DBED coordinate with DLNR to develop a position on a geothermal resource management structure.
- DBED develop, for the Governor's consideration, an energy strategy plan that incorporates geothermal.
- DLNR/Susumo Ono continue to develop a coordinated monitoring/enforcement program that may involve third party monitoring for the State.
The Governor encourage HECO to take the lead on a cable authority.

Also attached is a folder containing a draft discussion of various issues that was provided to the participants before the workshop took place.

RAU/GOL:dt

Attachments

cc: Hon. William W. Paty
Hon. John Lewin
Hon. Harold S. Matsumoto
Susumu Ono
I. Present Energy Management Structure is Inadequate

Hawaii has a large energy supply problem. Big Island capacity is stretched resulting in rolling blackouts. Other neighbor islands have limited capacity. HECO has enough air quality increment to allow one more large-scale fossil plant on Oahu.

The State needs the capability to set energy generation priorities, to site plants and transmission lines, and to initiate consolidated permit applications. The present regulatory responsibilities of any agency should not be abrogated.

Recommendation: DBED is drafting a bill for consideration by the Governor that would establish a Renewable Energy Authority.

II. State Air Quality Standards for Geothermal Should be Flexible

It is politically unacceptable not to develop geothermal air quality standards that are not as tough as California. After years of discussion and review, it is apparent that a (cumulative) ambient air quality standard and a requirement for Best Available Control Technology (BACT) is needed. The ambient air quality standard for hydrogen sulfide should be based on human health, not nuisance, considerations. Setting a limit on emissions per plant is undesirable because it reduces DOH's flexibility in making individual plant air quality permit decisions.
Recommendation: Establish an ambient air quality standard of 25 parts per billion (ppb) for hydrogen sulfide. Establish a requirement that each facility incorporate the best available control technology (BACT). Review the hydrogen sulfide air quality rules as additional experience is gained, specifically before each increment of 100 megawatts of geothermal capacity is attained.

III. Generic Statewide Noise Standards are Needed

DOH has the authority to regulate noise. DOH has developed noise standards for the City and County of Honolulu, but not for the neighbor islands. The Big Island has adopted generic guidelines of 45 dba night and 55 dba day which may be too limiting.

Cross training in noise monitoring is plausible and has occurred between DOH, DLNR and the County of Hawaii Planning Department.

Recommendation: DOH develop generic statewide noise regulations. In the interim, DOH assist the counties with noise enforcement.

IV. Source of Long Term Funding for Community Asset Fund

Short term State funding for the Asset Fund has been taken care of. Revenues from sale of the geothermal steam from HGP-A has been identified as a long term source of funds for the Asset Fund. However, there are other requirements to be met from these revenues such as operation and maintenance, OHA, DLNR royalties, equipment and personnel for monitoring and enforcing geothermal
standards, and amortization of piping costs to carry the steam to a private plant.

The concept of an Asset Fund is a potential bad precedent for public taking of lands.

Recommendation: DLNR meet with new County of Hawaii administration to discuss strategy for long term funding of the Asset Fund.

V. Sharing of Geothermal Royalties

DLNR is authorized to require royalties of 10% to 20% of the value of the geothermal resource but has specified 10% in geothermal mining leases issued to date. The royalties may be waived for up to 8 years on any well. OHA may want 20% of the State's 10%. Unsuccessful bills have been occasionally introduced to provide a percentage of the royalties to the County in which the resource is located.

The administration has been reluctant to grant new revenue sources to the Counties.

Recommendation: Since the County would be the beneficiary, the County should take the initiative on royalty sharing.

VI. Permits should Incorporate Some Geographic Flexibility

Particularly in the exploration phase, a geothermal developer needs some geographic flexibility because the results from a particular well will often dictate where the next well should be drilled.

DLNR is being less restrictive geographically in its permits provided preliminary surveys such as
archaeological and biotic are conducted before land is cleared. The County of Hawaii tends to be restrictive on well siting. The County's position on exploratory wells outside of Geothermal Resource Subzones is unknown. Additional agency resources may be needed.

**Recommendation:** DLNR meet with the new County of Hawaii administration to develop a position on flexibility in siting exploration wells and a position on wells outside of Geothermal Resource Subzones.

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**VII. Confidentiality of Private Well and Exploration Data**

Presently the University, under a contract with the State, is drilling Scientific Observation Holes (SOH) to assist and stimulate private exploration efforts. The SOH program and the preparation of geothermal resource models would be more effective if private well and exploration data were available. Private data is provided to BLNR who cannot in turn provide the data to anybody else for one year.

Private developers would probably be willing to provide data to a government entry. The entity might be a geoscientific committee of State, University and U.S. Geologic Survey scientists.

**Recommendation:** DBED coordinate with DLNR to review the need for an overall resource management structure. If this structure is within DLNR, there may be a need for implementing legislation to allow DLNR oversight over a broader range of responsibilities including electrical energy production and sales.
Public Perception of 500MW Geothermal Project

The State's public relations program should focus on energy and not the 500 MW program. The Middle East situation, rolling blackouts on the Big Island and the demise of sugar plantation are real energy problems.

Recommendation: DBED draft an energy strategy plan for the Governor's consideration and approval.

Monitoring and Enforcement

Industry self-policing is okay, but a preferred method may be third party monitoring under contract to the State with funding from the private developers to the State. The State should have resources for third party monitoring quality assurance.

Recommendations:

Separation of Geothermal and Cable

The cable may not be fundable by HECO. HECO is pursuing the Authority concept which is preferred over the Administration having cable responsibility.

HECO has need to interconnect Maui, Hawaii and Oahu even without geothermal.

Recommendation: The Governor meet with HECO top management to determine that HECO is willing and able to take the lead on the cable authority concept. Then DBED brief HIGA and Pro Geothermal Alliance.