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DEPARTMENT OF BUSINESS AND ECONOMIC DEVELOPMENT

JOHN WAIHE
GOVERNOR
ROGER A. UVELING
DIRECTOR
BARBARA KIM STANTON
DEPUTY DIRECTOR
LESLIE S. MATSUBARA
DEPUTY DIRECTOR

KAMAMAHU BUILDING, 250 SOUTH KING ST., HONOLULU, HAWAII
MAILING ADDRESS: P.O. BOX 2309, HONOLULU, HAWAII 96804
DEPT. OF LAND AND NATURAL RESOURCES
STATE OF HAWAII

RUSH

FASCIMILE TRANSMISSION

DATE: March 6, 1990
TO: The Hon. William Paty
DLNR
FAX #: 548-6461
FROM: Leslie S. Matsubara, Deputy Director
FAX #: (808) 548-1746

MESSAGE:

RE: Maui County Council Geothermal Informational Meeting

No. of Pages Including Transmittal Sheet: 6

Note: Should you not receive all pages, please call 548-4619. Thank you.



DEPARTMENT OF BUSINESS
AND ECONOMIC DEVELOPMENT

KAMAMALU BUILDING, 250 SOUTH KING ST., HONOLULU, HAWAII
MAILING ADDRESS: P.O. BOX 2389, HONOLULU, HAWAII 96804 TEL. EX: 7430250 HDPED FAX: (808) 523-6637

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DIRECTOR
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March 6, 1990

MEMORANDUM

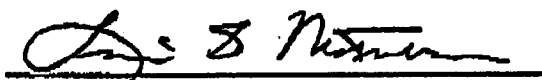
TO: The Hon. John Lewin
The Hon. William Paty
Harry Olson, HNEI
Dan Williamson, HECO

FROM: Roger A. Ulveling

SUBJECT: Maui County Council Geothermal Informational Meeting

Attached are the agenda, press release and memo to Councilman Nishiki regarding Wednesday evening's meeting. As you are aware, the meeting starts at 7:00 p.m. Geothermal is the only item on the agenda. All invited resource persons will have up to ten minutes to present their testimony. The public will also be allowed to testify for up to three minutes each. Therefore be prepared for a 3-4 hour meeting.

Please contact me or the Office of Council Services at 243-7838 if you have any further questions.



FOR THE DIRECTOR

Attach.

cc: Chuck Freedman

R E V I E W
COMMITTEE OF THE WHOLE

March 7, 1990

7:00 p.m.

Council Chamber

7:00 p.m. Item #11 Relating to Geothermal Development.

**Corporation Counsel
Planning Director
Director of Public Works
Director of Water supply**

**William Paty, Chairperson, BLNR
Jack Lewin, Director, DOH
Roger A. Ulveling, Director, DBED
or Leslie Matsubara, Deputy
Harwood Williamson, Pres.,
Hawaiian Electric Co.
Tom Jesiarny, Exec. Asst., Maui
Electric Co.
Robert Mowris, Energy Consultant
Steven Moser, M.D.
Ron Phillips, Puna Community Assn.
Nelson Ho, Regional VP, Sierra Club
Pua Kanahale, MCC Instructor
Dr. Harry J. Olsen, Hawaii Natural
Energy Institute
Isaac Hall**

10:AGENDA:jm (2/28/90)

FOR IMMEDIATE RELEASE:

February 27, 1990

PRESS RELEASE BY:Goro Hokama, Council Chair *ghg***FURTHER INFORMATION:**Office of Council Services
Phone: 243-7838

Council Chair Goro Hokama has announced that the Maui County Council's Committee of the Whole has scheduled an informational meeting on geothermal development in Hawaii. The meeting will be held on March 7, 1990 at 7:00 p.m. in the Council Chamber, located on the eighth floor of the County Building.

A host of resource persons have been invited to speak on the subject. Persons speaking in support of geothermal development include:

Mr. William Paty, Chairperson, Board of Land and Natural Resources, whose department is concerned with geothermal subzones and the permitting process;

Mr. Jack Lewin, Director, Department of Health, whose department is required to enact air and water pollution control standards for geothermal emissions;

Mr. Roger A. Ulveling, Director, or Mr. Leslie Matsubara, Deputy Director, Department of Business and Economic Development, whose Energy Division is responsible for geothermal development in Hawaii;

Mr. Harwood Williamson, President, Hawaiian Electric Company; and

Mr. Tom Jezierny, Executive Assistant, Maui Electric Company.

Persons speaking on the economic, health, environmental, spiritual and cultural aspects of geothermal development include:

Mr. Robert J. Mowris, Energy Consultant and Engineer formerly with Lawrence Berkeley Laboratory, who has just completed a study, "Energy Efficiency and the Least-Cost Planning: The Best Way to Save Money and Reduce Energy Use in Hawaii";

Steven Moser, M.D., who has done research on the health effects of geothermal emissions;

Mr. Ron Phillips, representative of the Puna Community Association, who will provide a summary of the effects of geothermal development on persons who have experienced it;

Mr. Nelson Ho, Regional Vice-President for the Sierra Club, who will focus on a discussion of the undersea cable; and

Ms. Pua Kanahelo, Maui Community College instructor, who will provide information on the cultural and spiritual aspects of geothermal development.

Business organizations, community associations and all interested persons are urged to attend this informative meeting. Public testimony is welcome. Please call the Committee staff, Dianne Shimizu or Roy Hiraga, for further information at 243-7838.

16:COW1:ds

March 1, 1990

MEMO TO: Councilman Wayne K. Nishiki
 FROM: Council Chair Gore Hokana *GH*
 SUBJECT: GEOHERMAL INFORMATIONAL MEETING

I received your memorandum dated February 28, 1990 regarding the Committee of the Whole's March 7, 1990 geothermal informational meeting. I have no objection to your line up of speakers. They will each be allowed to make ten minute presentations, but I will not allow a debate.

The Committee will follow the usual procedures for accepting public testimony. Witnesses will be allowed to speak for three minutes and may return to speak for another three minutes if they are unable to complete their testimony but only after all witnesses have testified.

If you have any questions, please feel free to discuss them with me.

17:COW2:ds

March 6, 1990

MEMO TO: Council Chair Goro Hokama
F R O M: Dianne Shimizu *ds*
Legislative Analyst
SUBJECT: ROSTER OF SPEAKERS FOR MARCH 7, 1990 GEOTHERMAL
INFORMATIONAL MEETING

The following is the line-up of speakers which you approved at the request of Councilmember Nishiki.

- A. Ten minute presentations as follows:
1. Mr. Roger A. Ulveling, Director, Department of Business and Economic Development
 2. Mr. Robert J. Mowris, Energy Consultant and Engineer
 3. Mr. Tom Jezierny, Executive Assistant, Maui Electric Co.
 4. Mr. Ron Phillips, representative of the Puna Community Association
 5. Dr. Jack Lewin, Director, Department of Health
 6. Dr. Steven Moser
 7. Mr. William Paty, Chairman, Board of Land and Natural Resources
 8. Mr. Nelson Ho, Regional Vice President, Sierra Club
 9. Dr. Harry Olsen, Hawaii Natural Energy Consultant
 10. Ms. Pua Kanahale, Maui Community College Instructor
 11. Mr. Isaac Hall, Attorney
 12. Dr. Aluli
 13. Mr. McKusick or Mr. Tippelick
- B. Public testimony to follow, limited to three minutes.

If you have any questions, please see me.

3/7/90

Main County Growth Briefing

1) Royal Welling

- Kishiki - state subsidy (?) for geothermal exploration vs. private funding (why does the state & Fed govt. bear the risk for such development?)
- 100 ppb vs 5 ppb H_2S emissions (nuisance level) wind will blow H_2S into surrounding communities and the Kikeri Resort development.
 - 55% (jet fuel) of total oil consumption

- Linda - why geothermal rather than combination of solar/wind?
- Has DBED done a comparison study? - No
 - Solar water heating = 3,000 barrels/day savings
 - Does DBED have an analysis of (1.5) solar acreage vs. geothermal for equivalent MW of power.
 - Currently DBED has EIS, Rec. Assessment, Cost

H - Who are the RFP companies?

L - What is the EIS process?

- ### 2) Mr. P. Morris - Research engineer (L.B.L) → energy efficiency
- Fluorescent bulbs
 - Title 24, Calif. Bldg Code efficiency

Sejourning - Hees

- 1990 Hees to make a decision for 1995

power needs (e.g. build oil fired plants)

R. Phillips - concerns re OSHA and the responsibility

of DBES, DENR, County of Hawaii

- Deletion of CFC by proceedings for growth

develop. permitting

- Rule 12 mediation - no value, no funding of fact, no record -> waste of pcc time.

- should growth be subsidized by the state.

- H.B. 3285 Andrews Bill ready for cross-over "Energy Commission"

N - Council to review H.B. 3285 bill.

Lewin - Air rules, none for diesel generators

- new rules proposed for public bus 1990

- T/M-p 1989 AIC for 12 wells, unknown resource

- OSHA 1990 Feb permit, lowest H₂S stands.

- 5 ppb plant operation

100 ppb venting period of production after 4 hrs

20,000 ppm H₂S OSHA stand.

1% of OSHA = 100 ppb

$$10,000 \text{ ppm} = 10 \text{ ppb} \quad 1 \text{ ppb} = \frac{1}{1,000,000} \times \frac{1000}{1000}$$

$$10,000 \text{ ppm} \div 100 = 100 \text{ ppm} \quad 1 \text{ ppb} = 1000 \text{ ppm}$$

$$= .1 \text{ ppb} \quad (3)$$

(OSHA) 100 ppm =

Lewin -

- EIS have not been done. (Waring True/Mid-jac did prepare an EIS)
- DOT has contingency plan for worst case scenario.
- where is gas well (inj) w/ respect to UKC line. (above UKC line, need to determine whether there is potable water in the injection area)
- BACT for bromine will be re-injection of fluids.
- just Lewin's noise and smell may be a problem to nearby residents.

Moser - questions OSMAT ATE studies

- Russian study on H₂S levels
- DOT earlier study Lestani vs Hawaii beaches
- Israel study
- Mercury, Bromine emissions and effect on plants and animals
- 100,000 Liters/hour of effluent per well @ 2.5 MW/well
- PTO conditions in ATE permit (OSMAT)
- Calif shut down a plant due to contamination of ground water resource.
- OSMAT article vs Richard comments related to moving the UKC line based on Iovantti report
- Gypsum production falling.
- Gypsum resource is not renewable

MOSW - noise plots compared to geoid emissions
130 dba during venting
120 dba " drilling

- Air immersion layer
- lack of soil stuffing

Patey

- Act 276, SLH 1983
- make statement that chances plain to none that developer will replace in Maui based on 25% probability.
- stated that developer should be aware of the opposition and compare to the risk based on 25% probability.
- 500MW project is a force until such time that the resource can be confirmed and proved based on drilling.
- rather than withdraw area, BLMK can just stop issuing permits for that area

N1 - what if Council asks BLMK to withdraw GMS. - will see

N - asks what permits required for Ag land

N - what about the request for withdrawal

Can the county ask for withdrawal

- what about creation of ordinance stricter than BLMK regi.

Nelson/Ho - Gov made statements that etc they are valuable. Why then do we use mediation which is flawed.

- 1) eg. peak growth will not reduce oil imports.
- 2) growth development cannot out conservation. cannot co-exist.
- 3) Maui County should learn from mistakes of Hawaii County
- 4) Peter Adair (AOC) criticized the mediation rules
- 5) Surrogate cable not representation of actual cable.
- 6) law suit will be submitted by Sierra Club on the requirement for NEPA. they want Federal EIS rather than state EIS
- 7) cable cost not worth the risk of bill when other measures are available.
- 8) oil fired generators use 'residual' oil resultant from processing of crude for gas. not jet fuel & therefore growth will in fact not reduce imports of oil.

Howard Edrune
Wayne Nistinski
Velma Santos
Goro Hokama
Joe Tanaka

(6)

> 1000 attendance

Osori - soil project

- 800' elevation @ Pua Na'io (2) soil wells in the GRS
- DNRK conditions
- County has the conditions (GRK)
- \$800,000 for soil (@ 4,000' depth)
- injection induces faulting or creates earthquakes
- what about volcanic hazards

Kanahale - resident of Big Island of Maui

- Pele religious stream is a gift but not for commercial purposes.
- Stream is not ready to be used.

Hall - not present

- Aluli
- PDF Northwest Economic Study prepared
 - Stopping development plan for geothermal
 - Land exchange
 - PDF filed suit on religious grounds, lost on appeal also
 - PDF then filed suit on grounds of public purpose of the land exchange, lost in Fed Cir. Ct., now appeal to 9th Cir. Ct.

Comments of Paly, Levin, Uveling leaving.

- Atul: — AEC permit in court now - Kimura
- Uveling promoting growth catch based on \$1.7 bill estimate vs. PDF survey of cost @ \$4.6 bill.
- growth will lead, massive industrialization of all islands wherever catch by truck land
- expenses from research
- Quote all to protest > 1000 people on March 24 to go to site.

McKusick - (Toppelick proj. analyst) for NW Assoc came to cost of \$4.6 bill. vs. State estimate of \$1.7 bill.

- State has recently revised its estimate based on RFP.
- \$ 3.4 to 4.6 bill range for cable.
- Conservation should be pursued w/ the same zeal as is the growth project.