

PO-IR-2

Ref: HECO's actions to reduce exposure to EMF under the State of Hawaii Department of Health's "prudent avoidance" standard.

- a. Please produce copies of all communications and correspondence between (1) HECO, its officers, employees, and agents and (2) any government official or entity concerning EMF.
- b. Please produce copies of all documents that describe, clarify or explain all actions that HECO may take to meet the "prudent avoidance" standard to reduce exposure to EMF set by the State of Hawaii Department of Health.
- c. Please produce copies of all documents that explain whether or not EMF impacts the health of children.

HECO Response:

- a. HECO has voluminous correspondence and communications between HECO and "government officials" or "government entities" regarding EMF, some of which may be recent, and some of which may be years old. Such information may be in various locations and with various individuals within the Company. In responding to this request, HECO has expended substantial efforts to identify and make available (or to attach if the documents are not too voluminous) a voluminous amount of material, to the extent that the material appears to be reasonably responsive to the broadly-worded request, and does not fall within recognized privileges (such as the attorney-client privilege.)

At the same time, HECO objects to this information request that asks for "all communications and correspondence between (1) HECO, its officers, employees, and agents and (2) any government official or entity concerning EMF" on the grounds that the request is overly broad, unduly burdensome, and not limited in time, and would require the production of a voluminous amount of documents. HECO also objects to the undefined term "communications" as vague and ambiguous. Nonetheless, HECO has expended

substantial time and effort in identifying responsive documents. Seven HECO employees working full-time and part-time spent over 160 hours responding to the two information requests submitted by the Public Officials. Without waiving its objections, HECO is providing a copy of the following communications/correspondence between HECO and its representatives and “government officials” or “government entities” concerning EMF under a separate transmittal. This list was compiled based on the result of requests that asked HECO employees that would most likely be involved in such requested communications and correspondence to provide a copy of those documents.

1. Letter from Goodwill Anderson Quinn & Stifel to the State DOH dated February 11, 2004 (without attachments);
2. Letter from HECO to Senator Carol Fukunaga dated December 15, 2003, (similar letters were sent to Representative Scott Saiki and Councilmember Ann Kobayashi).
3. Email from HECO to DOH, dated July 17, 2001;
4. HECO testimony to the Senate Committee on Commerce and Consumer Protection regarding Senate Concurrent Resolution 61, April 1, 1999;
5. Fax from DOH to HECO dated March 29, 1999;
6. Fax from HECO to DOH dated March 18, 1999;
7. Fax from HECO to DOH dated March 5, 1999;
8. Letter from HECO to Senators Brian Taniguchi and Brian Kanno dated February 22, 1999;
9. HECO testimony to the Senate Committee on Commerce and Consumer Protection regarding Senate Bill 143, February 16, 1999;
10. HECO testimony to the Senate Committee on Commerce and Consumer Protection regarding Senate Bill 384, February 16, 1999;
11. Letter from HECO to various elected officials regarding completion of the EIS for the Kamoku-Pukele 138kV Transmission Line, December 1998;
12. Fax from DOH to HECO dated September 16, 1998;
13. Letter from HECO to Chair, Manoa Neighborhood Board, dated September 19, 1997;
14. Letter from HECO to Chairperson, Kuliouou-Kalani Iki Neighborhood Board dated July 14, 1997;
15. Fax from HECO to State Department of Health dated July 2, 1997;

16. HECO testimony to the House Committee on Finance regarding HB2239 HD1, February 21, 1997;
17. HECO testimony to the House Committee on Consumer Protection and Commerce regarding House Bill 2239, February 5, 1997;
18. Letter from HECO to Robert Fung, Public Utilities Commission dated September 20, 1996;
19. Letter from HECO to Department of Education, dated August 29, 1996;
20. Letter from State Representative Ed Case to HECO dated August 1, 1996;
21. Letter from HECO to Office of Council Services, City & County of Honolulu, dated May 23, 1996;
22. Fax from HECO to Councilmember Duke Bainum's office, dated April 15, 1996 (without the attachments);
23. Fax from HECO to Councilmember Duke Bainum's office dated January 31, 1996;
24. Letter from HECO to Housing Finance and Development Corporation dated October 24, 1995;
25. Letter from Housing Finance and Development Corporation dated September 6, 1995;
26. Letter from HECO to Chairperson, Palolo Neighborhood Board No. 6 dated September 6, 1994;
27. Letter from HECO to State Department of Health dated April 4, 1994 (without attachment);
28. Letters from HECO to DOE District Superintendent's dated March 10, 1994 (without attachments);
29. Fax from DOH to HECO regarding revised DOH Policy, February 15, 1994;
30. HECO testimony to the Joint House Committees on Health and on Human Services regarding House Bill 3241, February 14, 1994;
31. Letter from Waimalu Elementary School to HECO dated January 20, 1994;
32. Notes for EMF Meeting between HECO, Department of Health, and Department of Education held on January 14, 1994;
33. Letter from HECO to State Department of Health dated November 3, 1993;
34. Letter from HECO to State Representative Gene Ward dated September 24, 1993;
35. Letter from Representative Gene Ward to HECO dated September 17, 1993;
36. Letter from HECO to Department of Labor & Industrial Relations dated June 10, 1993;
37. Letter from HECO to the Department of Health dated June 10, 1993;
38. Letters from HECO to the Department of Education dated June 10, 1993;
39. Letter from HECO to State Department of Education dated May 12, 1993;

40. HECO testimony to the Joint House Committees on Health, on Intergovernmental Relations and International Affairs regarding HR 260/HCR 264, April 15, 1993;
41. HECO testimony to the Senate Committee on Health regarding SCR 152, SR 89, SCR 172, April 2, 1993;
42. Letter from HECO to State Department of Health dated March 29, 1993;
43. Fax from HECO to State Department of Health dated January 28, 1993;
44. Letter from HECO to State Department of Health dated January 11, 1993;
45. Letter from HECO to State Representative Duke Bainum dated December 28, 1992 (without attachments);
46. Letter from HECO to State Representative Duke Bainum dated December 23, 1992 (without attachments);
47. Letter from HECO to State Department of Health dated September 3, 1992;
48. Letter from U.S. Representative Patsy Mink to CH2M Hill dated September 1, 1992;
49. Letter from HECO to U.S. Representative Patsy Mink dated April 28, 1992;
50. Letter from U.S. Representative Patsy Mink to HECO dated March 25, 1992;
51. Letter from State Senator Norman Mizuguchi to HECO dated February 24, 1992;
52. Letter from HECO to State Department of Health dated February 21, 1992;
53. Letter from State Representative Mike O'Kieffe to HECO dated February 20, 1992;
54. Letter from HECO to Councilman Andrew Mirikitani dated February 14, 1992;
55. Letter from HECO to Public Utilities Commission dated November 21, 1991 (without attachment);
56. Letter from HECO to State Department of Health dated October 10, 1991 (without attachment);
57. Letter from Chair Ewa Neighborhood Board No. 23 to HECO dated August 12, 1991 (incomplete letter);
58. Letter from HECO to State Department of Health dated December 12, 1990 (without attachments);
59. Letter from State Department of Health to HECO dated March 16, 1990 (incomplete letter);
60. Letter from HECO to Representative James Shon dated September 18, 1989;
61. Letter from HECO to Representative James Shon dated August 30, 1989;
62. Letter from HECO to U.S. Representative Patsy Mink dated August 10, 1989;
63. Letter from U.S. Representative Patsy Mink to HECO dated August 8, 1989;
64. Letter from Councilmember Arnold Morgado to HECO dated July 21, 1989; and
65. Letter from HECO to City Council Chairman Arnold Morgado, dated July 19, 1989.

In addition, HECO has submitted Environmental Assessments/Environmental Impact Statements (“EA/EIS”), which among other things, address EMF, to government agencies for certain projects. Copies of the EA/EIS’ were sent to City and State agencies for its review and comment. A listing of the EA/EIS’ (including the Draft and Final versions) that HECO has available is provided in the response to PO-IR-1 as page 24. The EA/EIS’ are voluminous and will be made available for review at HECO’s Regulatory Affairs office two business days after a request is received. Please contact George Hirose at 543-4787 to make arrangement for a review of this material.

HECO submitted testimonies, exhibits, and responses to information requests regarding EMF to the Commission and the Consumer Advocate in support of 138kV transmission line or 46kV subtransmission line applications requesting Commission approval for capital expenditures pursuant to General Order No. 7, paragraph 2.3(g)(2). A listing of the EMF related submittals is provided in the response to PO-IR-1 as pages 20-23. This material is voluminous and is available for review at HECO’s Regulatory Affairs office three business days after a request is received. Please contact George Hirose at 543-4787 to make arrangement for a review of this material.

In the Board of Land and Natural Resources contested case hearing for HECO’s Wa’ahila Ridge Conservation District Use Application (CDUA) (DLNR File No. OA-2801), HECO submitted the written direct testimonies of (1) J. Michael Silva, (2) John Cooper, (3) Linda Erdreich, Ph.D., and (4) Stuart Aaronson, M.D. that addressed various issues regarding EMF. In addition, Michael Silva, John Cooper and Linda Erdreich, Ph.D., testified at the November 6, 2001 contested case hearing. A copy of these testimonies, including the CDUA hearing transcript, is available for review at HECO’s Regulatory

Affairs office. Please contact George Hirose at 543-4787 to make arrangements for a review of this material.

- b. HECO objects to this request as overbroad to the extent that it asks for “all” documents that “describe, clarify or explain all actions” that HECO has taken or may take to comply with the State Department of Health (“DOH”) “prudent avoidance” policy for projects other than the East Oahu Transmission Project. Without waiving its objections, HECO responds by referring to and incorporating by reference the following documents, which explain how “prudent avoidance” will be applied to the 46kV Phase Project: (1) HECO T-2, pages 10-11; (2) HECO T-10, pages 13-15; and (3) the Draft Environmental Assessment for the East O’ahu Transmission Project 46 kV Phased Project, pages 4-97 to 4-100, submitted to the Public Utilities Commission in August 2004. Please note that the State Department of Health (“DOH”) has a “prudent avoidance” policy, and not a standard. (See HECO-1101 for a copy of the DOH policy relating to EMF.) There are no standards in Hawaii for electric or magnetic field exposure. (See HECO T-11, pages 5-6.)
- c. HECO objects to this information request that asks for “all documents that explain whether or not EMF impacts the health of children” on the grounds that the request is overly broad, unduly burdensome, not limited in time, and would require the production of a voluminous amount of documents. HECO objects to the use of the undefined term “impact” as vague and ambiguous and objects to the request generally to the extent it may encompass documents not within HECO’s possession. In addition, the request could be construed to require HECO to produce copies of documents of which HECO is not aware. Without waiving its objections, HECO responds by referring to and incorporating by reference HECO ST-11A (testimony of Linda S. Erdreich, Ph.D., regarding “EMF: Epidemiology”),

HECO-ST-1101A (the list of references cited by Dr. Erdreich), and HECO ST-11B

(testimony of Stuart Aaronson, M.D., regarding “EMF: Oncology”). Without waiving its objection, HECO is also providing the following major references published subsequent to the 1999 report to Congress by the National Institutes of Environmental Health (available at www.niehs.nih.gov/emfrapid) which were cited by Dr. Erdreich in her testimony, including:

1. Ahlbom A, Day N, Feychting M, Roman E, Skinner J, Dockerty J, Linet M, Michealis J, Olsen JH, Tynes T, Verkasalo PK. A pooled analysis of magnetic fields and childhood leukemia. *British Journal of Cancer*. 83:692-698, 2000. (See Attachment 1 to this IR response.)
2. Boorman GA, Rafferty CN, Ward JM, Sills RC. Leukemia and Lymphoma Incidence in Rodents Exposed to Low-Frequency Magnetic Fields. *Radiation Research*. 153:627, 2000b. (See Attachment 2 to this IR response.)
3. Greenland S, Sheppard AR, Kelsh MA, Kaune WT. A Pooled Analysis of Magnetic Fields, Wire Codes, and Childhood Leukemia. *Epidemiology*. 11:624-634, November 2000. (See Attachment 3 to this IR response.)
4. Kleinerman RA, Kaune WT, Hatch EE, Wacholder S, Linet MS, Robison LL, Niwa S, Tarone RE. Are Children Living Near High-Voltage Power Lines at Increased Risk of Acute Lymphoblastic Leukemia? *American Journal of Epidemiology*. 151:512-515, 2000. (See Attachment 4 to this IR response.)
5. Linet MS, Hatch EE, Kleinerman RA, Robison LL, Kaune WT, Friedman DR, Severson RK, Haines CM, Hartsock CT, Niwa S, Wacholder S, Tarone RE. Residential Exposure to Magnetic Fields and Acute Lymphoblastic Leukemia in Children. *The New England Journal of Medicine*. 337:1-7, 1997, July 3, 1997. (See Attachment 5 to this IR response.)
6. National Institute of Environmental Health Sciences (NIEHS). EMF Electric and Magnetic Fields Associated with the use of Electric Power: Questions and Answers. National Institute of Environmental Health Sciences of the U.S. National Institutes of Health, June 2002. (See Attachment 6 to this IR response.)
7. National Institute of Environmental Health Sciences (NIEHS). NIEHS Report on Health Effects from Exposure to Power Line Frequency Electric and Magnetic Fields. NIH Publication No. 99-4493. National Institute of Environmental Health Sciences of the U.S. National Institutes of Health, 1999. (See Attachment 7 to this IR response.)
8. United Kingdom Childhood Cancer Study (UKCCS) Investigators. Exposure to power frequency magnetic fields and the risk of childhood cancer. *Lancet*. 353:1925-1931, 1999. (See Attachment 8 to this IR response.)
9. United Kingdom Childhood Cancer Study (UKCCS) Investigators. Childhood cancer and residential proximity to power lines. *British Journal of Cancer*. 83:1573-80, 2000.

(See Attachment 9 to this IR response.)

10. United Kingdom Childhood Cancer Study (UKCCS) Investigators. Exposure to power frequency electric fields and the risk of childhood cancer in the UK. *British Journal of Cancer*. 87: 1257-1266, 2002. (See Attachment 10 to this IR response.)