

CA-IR-18

**Ref: T-4 Pages 71.**

Regarding “Options to Relieve the Koolau/Pukele Overload Situation,” please respond to the following questions:

- a. Did HECO consider rebuilding the 138 kV line from Halawa to Koolau as a double circuit line?
- b. If yes, what are the results of that review pertaining to cost, feasibility, permitting, etc? Provide copies of all documentation and/or analysis conducted.
- c. If no, explain why not.

**HECO Response:**

- a. No, HECO did not consider specifically rebuilding the Halawa to Koolau as a double circuit line.
- b. Not applicable.
- c. As stated in HECO T-4 (pages 7-8), HECO considered six of the alternatives, which were previously studied, which included four 138kV alternatives and two 46kV alternatives. In addition, HECO studied two additional 46kV alternatives, which included the Kamoku 46kV Underground Alternative and the Kamoku 46kV Underground Alternative – Expanded. Hypothetically, if rebuilding the 138kV line from Halawa to Koolau as a double circuit line was to be considered, this proposed option would only resolve the Koolau/Pukele Line Overload Situation. It would not provide an additional feed to the Pukele Substation to address the Pukele Reliability Situation. Also, it would not address the Downtown Line Overload Situation and the Downtown Substation Reliability Concern. The March 1998 East Oahu Transmission Requirements Update Study considered a Halawa-Koolau-Pukele Alternative, which included adding six new transmission lines: (1) Archer-Kewalo, (2)

Kewalo-Kamoku, (3) Halawa-School #2, (4) School-Kamoku, (5) Halawa-Koolau #2 and (6) Koolau-Pukele #3. The route for Halawa-School #2 line was not studied (i.e., double circuit line or a separate route from Halawa-School). The study concluded that the Halawa-School #2 line solved the Koolau/Pukele Line Overload Situation, however, a Koolau-Pukele #3 line was required to provide a third feed to the Pukele Substation to resolve the Pukele Reliability Concern, and the Halawa-School #2 line was required to resolve the Downtown Line Overload Situation. The other lines mentioned were to provide feeds to the Kewalo and Kamoku Substations, which were not in place at the time of the 1998 study, and to provide a third feed to the Archer Substation using the Kewalo and Kamoku Substations and lines once they were installed.