

Investigation of the 2006 Hawaii Island Earthquake and Widespread Outage

**Review of External Communications
PUC Docket 2006-0431**



**Prepared by Hawaiian Electric Company, Inc.
March 2007**

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**HAWAII ELECTRIC LIGHT COMPANY
OCTOBER 15, 2006 EARTHQUAKE OUTAGE
EXTERNAL COMMUNICATIONS REPORT**

I. EXECUTIVE SUMMARY

On October 15, 2006 at 7:07 a.m., a 6.7-magnitude earthquake struck just off the west coast of the Big Island near Puako, followed only minutes later by a second earthquake. The two earthquakes precipitated widespread outages on the Big Island and hampered cell phone and land line reception. Hawaii Electric Light Company (HELCO) personnel responded according to the Company's emergency response plan:

- A HELCO representative immediately reported to the Hawaii County Emergency Operations Center (EOC) to serve as the utility's civil defense/emergency services liaison.
- Additional dispatchers reported in to HELCO's Dispatch Center to respond to customer calls and concerns. Recorded messages also provided updates throughout the day and evening hours.
- As is the standard Hawaii County Civil Defense practice for major emergencies, all media communications were disseminated through the EOC, passing on information provided by the HELCO liaison as needed. Information on restoration status provided by the HELCO liaison was posted on a wallboard and used by the civil defense operators in responding to calls by the general public made directly to them. Several media located on site at the EOC also obtained system status information directly. The HELCO liaison and the HELCO President also responded directly to several media calls.
- Communications to key commercial customers were initiated to assess which facilities were out of power and determine priorities for restoration.
- The Company's accessibility, ongoing communication efforts and cooperation with Civil Defense and emergency services personnel have been acknowledged as excellent by the Hawaii County Mayor.

II. OVERVIEW INFORMATION

This review of external communications during the October 15 earthquake covers (1) communications with the public via the media and (2) through the Company's customer service communication channels (in this situation, the company's Trouble Desk), (3) communications with specific commercial customers and (4) communications with key emergency responders and other government contacts.

Staffing

Formal external communications with these audiences during the October 15 earthquake were performed by HELCO's Administration, Energy Services and Distribution personnel. Supervisors were alerted to the outages by a dispatcher who sent out an alpha-page. Key managers, supervisors and staff members reported to work at HELCO's main office or the Hilo Baseyard. In addition, the Administration manager reported to the Hawaii County Emergency Operations Center located at the Hawaii County Civil Defense offices by 8:00 a.m. Most personnel were on site at their respective positions between 7:40 and 9 a.m., and stayed until power was restored to customers (the island of Hawaii did not experience an island-wide outage and the majority of customers were restored by 12:45 p.m.). Dispatch personnel remained until 2:45 a.m. on the following morning to respond to customer calls.

III. COMMUNICATIONS WITH MEDIA

During a major public emergency in Hawaii County, the Hawaii County Civil Defense (CD) takes the lead in sending out any public announcements/press releases covering all matters including electricity. The role of HELCO is to serve as a liaison between the utility and the Hawaii County Emergency Operations Center (EOC), providing information to Civil Defense which in turn disseminates the information to the public via their emergency broadcast system and via press releases.

On October 15, 2006, the HELCO liaison reported to the EOC by 8 a.m. to coordinate activities with the state, county and municipal agencies. In doing so, the EOC was able to provide to HELCO the initial road closures status and EOC Civil Defense (CD) priorities through the liaison. The HELCO liaison, in turn was able to communicate the power system restoration status to the EOC CD, other emergency response agencies as well as media in attendance at the EOC. In addition, the CD operators used the HELCO information as needed in responding to calls by the general public made directly to their office.

The HELCO civil defense/emergency services representative was able to communicate using her personal cellular phone which allowed her to relay messages between the EOC and HELCO, as well as to answer direct media calls regarding HELCO specifically.

On October 15, 2006, these calls included a live phone interview with MSNBC and a phone interview with the Honolulu NBC affiliate, KHNL. By the time of the 2:32 p.m. afternoon interview with KHNL, the HELCO liaison was able to report that about 1200 customers remained without power in pockets across the Big Island, and HELCO crews were in the process of restoring those customers based on accessibility to the locations. (In some instances, landslides and other road closures limited access to the customers). See Appendix A for a media chronology.

HELCO President Warren Lee also responded to media inquiries made by local daily papers, the Hawaii Tribune Herald and West Hawaii Today which contacted him directly during the restoration progress.

Though the power outages that resulted from the earthquake were restored on the same day, at the Mayor's request, HELCO's civil defense liaison remained at the EOC during daylight hours over the next several days¹. On October 16, HELCO distributed its own press release regarding the events of the previous day. See Appendix B.

¹ On the afternoon of October 16, 2006, a lightning storm on the Big Island caused widespread power outages unrelated to the earthquake. The EOC remained in operation through October 19, 2006 to respond to both the storm effects and the earthquake after-effects. Non-County agencies and companies were released from the EOC after the last briefing on October 19, 2006, though the EOC continued to operate and respond to earthquake-related matters affecting the island of Hawaii.

IV. COMMUNICATIONS WITH CUSTOMERS VIA THE TROUBLE DESK

HELCO's Dispatch trouble line serves as the primary communication contact point for customers to call for information during system emergencies. On the morning of October 15, 2006, the trouble line was manned by a single dispatch operator whose shift had started at 7:00 a.m. After the earthquake hit and power outages occurred, the operator sent an alpha-page via email to all supervisors informing them of the power interruptions. Many supervisors arrived by 7:40 a.m.

Customers who called the trouble line from 7:51 a.m. would have heard the following customized recorded greeting:

"Aloha, you have reached the Hawaii Electric Light Company's Trouble Desk. All calls are recorded so that we may better serve you. Today is Sunday, October 15, 2006 at approximately 7:51 a.m. Due to the earthquake this morning, there are numerous power interruptions in various locations on the Big Island. We have dispatched personnel to investigate and will work to restore power to the affected customers; however we do not have an estimated time of power restoration. If you still need to speak to a HELCO representative, stay on the line and the next available agent will assist you. Mahalo."

It should be noted that due to the specific system conditions on the island of Hawaii, power outages were not island-wide. While initial call volumes were higher than usual, it appears most customers heard the recorded message, and hung up which helped to free up the phone lines for additional callers to get through.

Additional dispatchers arrived at 8:30 a.m. and 9:00 a.m. to provide assistance, followed by another dispatcher at 10:15 a.m.

Customized recordings were made at the following times with these appended updates to the original message for customers calling into the trouble line. These recorded messages provided basic system status, and once heard, most customers hung up which allowed other callers to dial in.

8:46 a.m. – "Due to the earthquake this morning, there are power interruptions throughout West Hawaii and the Puna areas."

10:07 a.m. – "Due to the earthquake this morning, there are power interruptions in the South Kohala resort areas and Honokaa areas."

4:52 p.m. – "Due to the earthquake this morning, there are power interruptions in the Honokaa area. Also a problem related to the earthquake was found in the North Kohala area that requires an interruption of customers in the area. Power restoration for the North Kohala area is expected to be completed within 2 to 3 hours."

Anecdotal comments from the Assistant Technical Superintendent – Operations indicated that customers who spoke to the dispatchers were very understanding of the situation and once they knew that HELCO was working on the restoration effort, they quickly got off the phone to free up the phone lines.

All dispatchers stayed through 9:30 p.m. when one staff was released. A second staff left at 10:10 p.m., and the remaining dispatchers stayed until 2:45 a.m. on October 16, 2006.

V. COMMUNICATIONS WITH SPECIFIC COMMERCIAL CUSTOMERS

Following the earthquake and outage, HELCO's Energy Services group reported to the utility's main office in Hilo, while one staff worked out of her home. From approximately 9 a.m. until 6 p.m., Energy Services staff initiated calls to key commercial customers including critical facilities such as the airport and hospitals, and the hotels.

Initial calls were to assess which customers had power and which did not. The Energy Services Manager stayed in close contact with the Transmission & Distribution Manager and Dispatch to assess the situation and assess why specific commercial customers were out of service. In some instances, there were problems on the customer side in restoring power.

The Energy Services representatives worked with the T&D Manager to prioritize customer needs while still ensuring the system could be restored in a safe and reliable manner.

VI. COMMUNICATIONS WITH GOVERNMENT OFFICIALS

Local civil defense and emergency services

Immediately following the earthquake and outages across the Big Island, HELCO sent a representative to the Hawaii County Emergency Operations Center (EOC) to serve as HELCO's liaison with the Hawaii County Civil Defense (CD) and other emergency services. The HELCO staff person arrived at approximately 8 a.m. and stayed throughout the day until the early evening, about 6:30 p.m. A substitute from the Energy Services Department replaced her until he was released that evening at about 9:00 p.m. At the Mayor's request, HELCO's representative continued to report during the daylight and early evening hours to the EOC through Thursday, October 19, 2006.

As noted earlier in this report, during a major event in Hawaii County, the Hawaii County CD takes the lead in sending out public announcements covering all matters including electricity. HELCO's CD liaison provides information to the EOC to coordinate activities with the state, county and municipal agencies. This provided the initial road closure status and the EOC Civil Defense priorities to HELCO, such as hospital power supply problems, and provided the status of the power system restoration to the other emergency response agencies. In an interview with the consultants, Power Engineers, the Hawaii County Mayor praised the communications between HELCO and the EOC, and the cooperation of HELCO throughout the restoration to accommodate the needs of the other agencies.

VII. CONCLUSIONS AND RECOMMENDATIONS

In following its emergency response plan, Hawaii Electric Light Company acted in a responsible manner to communicate the effects of the earthquake and resulting outage to its customers, key government contacts and emergency responders. As restoration progress continued throughout October 15, 2006, HELCO personnel provided updates to the public and media via the Hawaii County Emergency Operations Center. The Dispatch staff also provided updated recordings on the company Trouble Line and answered calls until the early morning of October 16, 2006. The Company's accessibility, ongoing communications efforts and cooperation with Civil Defense and emergency services personnel have been acknowledged as excellent by the Hawaii County Mayor.

MEDIA COMMUNICATIONS CHRONOLOGY

Date	Time	Activity
15-Oct-06	8:00 a.m.	HELCO Manager of Administration arrives at the Hawaii County EOC - Civil Defense
	8:00 a.m. - 6:30 p.m.	Government agencies and companies report status of situation and operations at EOC. Media is present. Hawaii County Civil Defense broadcasts informational updates.
	a.m. - time unknown	HELCO Manager of Administration returns call to MSNBC News and is interviewed live concerning status of power outages on the island of Hawaii.
	1:10 p.m.	HELCO Manager of Administration returns call to KHNL and provides information on status of power outages on the island of Hawaii.
	2:32 p.m.	HELCO Manager of Administration calls KHNL to provide updated information at station's request.
	7:00 a.m. - 6:00 p.m.	Government agencies and companies report status of situation and operations at EOC. Media is present. Hawaii County Civil Defense broadcasts informational updates
16-Oct-06	7:30 a.m.	HELCO Manager of Administration speaks with Japan Broadcasting concerning status of power outages on the island of Hawaii.
	9:15 a.m.	HELCO Manager of Administration speaks with KHBC concerning status of power outages on the island of Hawaii.
	10:25 a.m.	HELCO Manager of Distribution speaks with KHBC concerning technical information related to HELCO's T&D system.
	2:40 p.m.	HELCO Manager of Administration speaks with KHON News concerning status of power outages on the island of Hawaii.
	time unknown	HELCO President speaks with KITV
	time unknown	HELCO President speaks with Honolulu Advertiser numerous times concerning damage to HELCO facilities and estimated cost of damage.

HELCO NEWS RELEASE

CONTACT: **JAY IGNACIO**
PHONE: 969-0224

Monday, October 16, 2006
3:00 p.m.

FOR IMMEDIATE RELEASE

Hawaii Electric Light Company (HELCO) has announced that on Sunday, October 15, 2006 at 7:08 a.m., approximately 40,000 customers islandwide experienced a power interruption as a result of the 6.7 magnitude earthquake that occurred that morning. The earthquake caused many transmission and distribution breakers to trip open as well as the following HELCO and Independent Power Producers (IPP) generation units:

- Hill 5 Steam Unit
- Hill 6 Steam Unit
- Waiiau Hydro-generation
- Hamakua Energy Partners (IPP)
- Wailuku Hydro-generation plant (IPP)
- Hawi Renewable Development Windfarm (IPP)

HELCO System Operators started additional generation units and remotely close breakers, restoring power to approximately affected 30,000 customers by 8:00 a.m. HELCO personnel were dispatched to manually close circuits that could not be remotely closed and repair equipment impacted by the earthquake.

At 10:09 a.m., approximately 1,800 customers that had power restored earlier had power interrupted again when Hamakua Energy Partner's CT-1 tripped off-line again. Additional generation units were started and those 1,800 customers had power restored.

The earthquake damaged numerous pole top insulators, and various substation equipment. One of the severely impacted areas was along

Highway 19 by Honokaa where six (6) spans of transmission lines fell when pole top insulators broke. Crews worked through the night and had power restored to most customers, including those in other areas, shortly after midnight.

HELCO's Trouble Desk has been receiving calls throughout the day from customer's reporting continued power problems and low electrical wires, and has been dispatching personnel to work to make necessary repairs. HELCO requests that all customers that are still experiencing power problems or see low electrical lines to contact HELCO's Trouble Desk at 969-6666. HELCO also reminds the public to stay clear of downed or low wires.

HELCO has been working closely with the Hawaii County Civil Defense and other County and State Agencies to coordinate and prioritize restoration work. HELCO would like to thank them for their hard work, as well as customers for their cooperation and understanding. Mahalo.

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