

Wildfire Safety Working Group

Wednesday, August 14, 2024

9:00am – 11:00am

MS Teams

Attendees:

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Alan Hirayama, PUC	James Abraham, HE	Mathew McNeff, HE
Alexander Gomera, HE	James Barros, HIEMA	Matt Lee, FEP
Ali Arabnya, Quanta	Jamie Suzuki (Madrigal), HE	Matthew Wall, HIEMA
Alison Scribailo, Quanta	Janet Yocum, FEMA	Michael Angelo, DCCA
Amy Adrian, HE	Jason Benn, HE	Michael Walker
Andrija Sadikovic, Quanta	Jeanne Johnston, FEMA	Miles Nagato, HE
Bernard Sadoulet, Kohala Ranch Firewise	Jeff Spohn, FEP	Nadja Turek, Alta Fiber
Brad Rockwell, KIUC	Jennifer Zelko-Schlueter, HE	Naomi Kuwaye, PUC
Brad Ventura, MFD	Jim Alberts, HE	Natalie Epenesa, HE
Brenda Iokepa-Moses, CoH	Jim Kelly, HE	Nathan Todaro, HE
Candice Lucas, HE	John Bravender, NWS	Neil Yamamoto, KSBE
Christine Wang, FEP	John Moore, HE	Raelynn Nakabayashi, BWS
Colin Yost, PUC	Jonathan Chin, HSEO	Randall Shiro, HE
Colton Ching, HE	Julian Li Vadera, Hi Tel	Rick Pinkerton, HE
Corey Shaffer, Verizon	Kahikina Burgess, HE	Riley Ceria, HE
Craig Clouet	Kainoa Stafford, Marriott	Riley Saito, CoH
Craig Souza, C&CH	Kandice Kubojiri, HE	Robb Tanaka, HE
Daelynn Judd, FEP	Katy Christiansen, NREL	Robert Stout, Cal Water
Daniel Masutomi, Hi Tel	Kauilehuamelemele Kauhane, QHS	Rod Aoki, RSA Law
Danielle Canfield-Jones, HE	Kawika Uyehara, DWS	Rudy Tamayo, HE
Darwin Okinaka, CoH	Keith Okamoto, DWS	Ryan Otsubo, MFD
Dave Okamura, HE	Kekoa Kaluhiwa, KSBE	Sarah Harris
David Kurohara, HE	Ken Aramaki, HE	Scott Boone, DCCA
David Mattice, PUC	Keola Siafuafu, HE	Scott Winecoff, T-Mobile
David Tester, HE	Kevin Dasso, Quanta	Sean Mastin, Alta Fiber
Debby Shin, PUC	Kevin Waltjen, HE	Shari Ishikawa, HE
Douglass Adams, CoH	Kimberly Vaituulala, HE	Sharri Thornton, HE
Elizabeth Songvilay, AT&T	Kimo Landgraf, CoM	Shayna Decker, HE
Emily Hyland, HDR	Kristen Okinaka, HE	Shayne Agawa, CoM
Erik Takayesu, Monarch Energy	Kurt Tsue, HE	Sherilyn Hayashida, DCCA
Ernest Lau, BWS	Kyra K Howe, PUC	Stephanie Donoho, KCRA
Erwin Kawata, BWS	LeeAnn Silva, QHS	Stephen Green, Cal Water
Francis Kau	Leland Cockcroft, HE	Steven Bergfeld, SoH-DOFAW
Fred Layi	Leo Asuncion, PUC	Taesun Kim, PUC
Gina Yi, HE	Lisa Dangelmaier, HE	Thao Tran, HE
Gregg Lemler, Quanta	Lydia Mertyris, HE	Tim Griffith, CoM

Henry Curtis	Madeline Krueger, C&CH	Tracie Black, HE
Henry Lee, HE	Marc Asano, HE	Trevor Manago, T-Mobile
Hiro Toiya, C&CH	Marcey Chang, DCCA	Troy Uyehara, HE
Jacob Tavares, Parker Ranch	Mark Vaught, Mahi Pono	Vanita Chhabra, Quanta
Jacqui Hoover, HIEDB/HLPC	Mason Withers, FEP	Yumi Kam

Agenda:

- Wildfire Safety Strategy Working Group #2 focus: Wildfire mitigation options
- Today’s objectives:
 - Review proposed wildfire mitigation strategies
 - Seek feedback on strategies, challenges, opportunities and additional considerations
- Recap of July 31, 2024 Working Group Meeting
 - The goal of the Working Group to support the development of Hawaiian Electric’s Wildfire Safety Strategy (WSS)
 - Reviewed Hawaiian Electric’s updated tiered risk maps
 - These maps focus on assessing risks based on utility infrastructure.
 - Limited feedback was received on the updated tiered risk maps from the Working Group. Hawaiian Electric is still looking for review and feedback on these updated maps.
 - Hawaiian Electric using that information and feedback to finalize maps for the WSS filed in December 2024.
 - A webpage has been established and is now available host Working Group materials
 - Marc will let the group know when materials are posted online
 - Link: [Wildfire Safety Working Group Documents | Hawaiian Electric](#)

Discussion – Wildfire Risk Maps

- Stakeholder: Is there a timeline for when more detailed maps be available for review and use?
 - HE: We can zoom into specific areas to provide specific map to working group members. We are currently working with the larger polygons and are gathering feedback. We do ask that map requests include boundaries in order to create a more detailed map that meets your needs.
- Stakeholder: What format are the maps in? ArcGIS? Are you able to share the data layer?
 - HE: We are actively working on a process to be able to share the GIS files with agencies.

Discussion – Ignition Risk Drivers

- Stakeholder: How are homes (number and proximity to each other) considered as a risk driver?
 - HE: Currently, we consider homes a fuel source after the fire ignites, not as a fuel source to start the ignition.

- Stakeholder: Forestry and wildfire state maps were developed with 5 categories. One of the categories focused on subdivision design, building materials, fuels, ingress, egress, etc. The base layer includes response capacity, response time, and access to fire station.
- Stakeholder: Should lines affected by lightening be a risk driver?
- Stakeholder: Will the following ignition risk drivers be added to this list? Wire to wire contact, equipment/facility failure, vandalism/theft, utility work/operation, contamination, and seismic/volcanic scenario. Does HECO currently collect data on these?
 - HE: Yes, to address the two questions, the ignition risk drivers are Hawaiian Electric's outage causes and sub-causes.
- Stakeholder: How do hurricanes come into play with the risk assessment? The Lahaina fires were fueled by high winds from a Hurricane.
 - HE: Winds associated with a Hurricane would fall into the high winds ignition risk drivers category

Discussion - Portfolio of Proposed Mitigation

- Stakeholder: Can you provide more information on the fire resistant pole wrap?
 - HE: Yes, we'll follow up with that information and we've been doing tests with the Honolulu fire department and can share that additional information as well.
- Stakeholder: What are the materials in the overhead lines?
 - HE: Our overhead line conductors are aluminum and some still made out of copper. The thinner and smaller diameter copper with a signal strand (instead of braided) conductors are now a priority to replace with multistrand aluminum conductors.
- Stakeholder: Are you using or looking into carbon fiber?
 - HE: Carbon fiber are typically used for longer high voltage transmission lines. Hawaiian Electric is looking at carbon fiber conductors to see if it has a wildfire resilience benefit.
- Stakeholder: What types of spacers are used and how are spacers modeled?
 - HE: When we add spacers to distribution lines, we review wind and tension rating. Hawaiian Electric to follow up with more information to help model spacers.
- Stakeholder: What role do undergrounding lines will play in mitigation including the impact on potential flood risk? Where do you see undergrounding most practical in the plan?
 - HE: Undergrounding is something we'd first look at from a cost vs. risk reduction perspective. For example, we may consider undergrounding in areas like egress routes in specific areas. Feasibility considerations may not allow for undergrounding to be an option. It is an option on the table that we're considering. As part of a Department of Energy (DOE) grant we received, we're looking at strategic undergrounding locations and areas to shift overhead to underground lines to reduce risks.

Discussion - Prioritization Approach

- Stakeholder: How will these strategies change based on PSPS? Hearing concerns from community that once a PSPS is triggered, there is a restoration delay due to onsite inspection. Curious if implementing some of these mitigation efforts will help lessen the amount of time the shutdown is occurring? These mitigation strategies seem to be on damage control instead of prevention.
 - o HE: There is a correlation between how we think about and operate a PSPS as we deploy hardening solutions to our grid. PSPS is focused on our highest risk areas and the infrastructure in that high risk area that may become an ignition source. The outcome of efforts to harden the grid and make operational improvements may be that the threshold established today could shift once structures these are in place.
 - o HE: When a decision is made to proactively shut off power to a circuit, we will not restore power without onsite inspection of the circuit. De-energized circuits need to be inspected to verify no damage occurred or lines are repaired before power is restored. Technology as part of our grid modernization work may be able to help restore power more quickly in smaller increments.
 - o HE: Grid hardening is a prevention source. Same as operational improvements can help prevent an impact to the grid as becoming an ignition source.
- Stakeholder: Additional considerations: 1) Transportation access and lifelong infrastructure to allow community to survive 2) Fragility of endangered species (Flora) and issues that may be associated with these to maintain preservation 3) partnership opportunities.
- Stakeholder: In addition to ingress and egress you may also want to look at 1) time of the day for example areas of transit and number of cars on the road and 2) time of the year for example the Kona Triathlon. Overlay these as considerations.
- Stakeholder: Looking at the PSPS fire risk maps comparing Oahu and Maui – What’s driving the difference? It appears the West Oahu boundary stops before major residential area and in Maui entire neighborhoods are included. Why does it stop short of residential on Oahu?
 - o HE: Fundamentally the PSPS areas are driven by the highest risk – fuels in the areas and where Hawaiian Electric infrastructure is located. Oahu and Maui have different fuel sources, different locations of ignition risk and unique infrastructure and circuit locations. On Oahu, due to how the grid was built, in some of the highest risk areas we were able to install a switch to sectionalize, or segment off, circuits to limit the shutoffs to certain areas. On Maui, the distribution grid doesn’t have the same opportunity to sectionalize the circuits making everyone downstream along the transmission lines affected by PSPS.
- Stakeholder: Based on the GIS data, I’m noticing wide tracks of ag land on the west side of Oahu.
- Stakeholder: Have you considered PSPS impact on fire safety including the impact to communication (i.e. internet and email)? What about the impact for residents keep landscape wet due to fire risk and their ability to run sprinkler systems?

- HE: We worked in conjunction with local county water, fire departments, first responders, emergency response agencies, and telecom through multiple conversations, including some of the impacts you described. We believe we have identified ways to mitigate these impacts. An emphasis during the initial PSPS development was to reach out to critical infrastructure providers to make sure we had backup capabilities and contingency plans to minimize impacts of PSPS.
- Stakeholder: Critical infrastructure mitigation – FEMA funded hazard mitigation grant program (up to \$300M) – are funds available to help build capabilities for backup power for essential water facilities. The threat of wildfires is not going away anytime soon.
- Stakeholder: Department of Energy is in coordination office on Maui and working closely with the county on water and wastewater that currently do not have backup power opportunities to apply for these grants.
- Stakeholder: To qualify for FEMA Hazardous Mitigation funding, project needs to be included in either State or County Hazard Mitigation Plans.
- Stakeholder: We brought up back up generators last conversation so guess we need to verify it was included in the updated Mitigation plan.
 - HE: look to see if your County mitigation plan includes back up generation.
- Stakeholder: Who are you folks planning to work with on this prioritization approach? Will you issue an RFP?
 - HE: In coordination with an experienced consultant, Hawaiian Electric is building a spreadsheet model to consider all of these factors to look at risk and efficiency for the initial WSS. This may evolve over time as we gain more experience and data. The outcome will be the right portfolio strategy to align with Hawaii’s needs. We’re developing this WSS in a quick timeframe and wanted to use an approach that fit in the timeframe that fit in the timeframe for 2025. This is an iterative approach and each year we will review and improve this process.
- HE: For clarification, our risk maps (slide 13) are based on view of Hawaiian Electric’s facilities and risks. We are focused on Hawaiian Electric’s ignition risk in relation to infrastructure facilities. Looking through the electric utility lens and not general wildfire risk.
- HE: We didn’t have a working group meeting specifically to talk through the risk model itself. If you’re interested in getting into the nuts and bolts of the model, please let Marc Asano know and he can hold a smaller group discussion for those interested.
- Stakeholder: We may also wish to look at Comprehensive Economic Development Strategy (CEDS) and work with Office of Planning & Sustainable Development (OPSD) to identify funding opportunities through US Economic Development Administration (EDA)

Discussion - Wildfire Mitigation Challenges and Opportunities

- Stakeholder: Possible to have alternate ways to support critical infrastructure during PSPS?
 - HE: Sometimes we can look at rerouting lines which require additional considerations including risk areas and feasibility of rerouting lines. We could

look at opportunities to keep some infrastructure energized based on risk levels. We will be assessing some long-term opportunities for less traditional solutions such as microgrids and off-site generation.

- Stakeholder: Some of the issues may also be undergrounding lines that feed pumps to help reduce wildfire risks and hardening against hurricanes. All solutions should be on the table.

Summary:

- Several mitigation options on the table and are currently being evaluated using available data.
- Balancing different goals and considerations focusing on the prioritization factors reducing the greatest amount of risk.
- Committed to a transparent process during the development of this Wildfire Safety Plan
- Feedback is important from this group as decisions are made.

Next Steps:

- Next meeting scheduled for Wednesday, August 21 at 9:00 AM with a focus on operational strategies and future enhancements to PSPS.
- Feel free email Marc Asano to provide additional feedback on the risk maps or topics discussed.
- Reminders and action items:
 - o Once we get to the development of a risk model, we'll convene a smaller group of those interested to review the model. Please email Marc Asano to be included.
 - o Requested for information on fire resident pole wrap.
 - o Request for GIS layer of the risk maps – will be made available to agencies.
 - o Request for follow up with more information and help on how to model line spacers.
- Thank you for participating and continue to provide questions and comments.