Comments Received After 4/15/2020 Meeting

From: Joy A. Mastache <Joy.Mastache@smud.org>
Sent: Wednesday, April 15, 2020 3:31 PM
To: Stockton, Katherine; Ormond, Jamie; Wildfire Safety Advisory Board
Cc: Laura Lewis; Steve Lins; Lora Anguay; Daniel J. Honeyfield; Joy A. Mastache
Subject: Response of SMUD to WSAB Questions for POUs

Thank you to the Wildfire Safety Advisory Board (WSAB) and Staff for your recognition of the unique qualities among the Publicly Owned Utility (POU) community and your thoughtful consideration of the POU wildfire mitigation planning approaches. On March 20, 2020, Marcie Edwards and the WSAB sent emails to CMUA, NCPA, SCPPA and Golden State Power Cooperative seeking a better understanding of POU Wildfire Mitigation Plans (WMPs). The Sacramento Municipal Utility District (SMUD) fully supports the presentation made by POU representatives at the April 15, 2020 WSAB Board meeting. The following responses on behalf of SMUD build on that collaborative effort.

The Board expressed *a particular interest in understanding the assumption set underlying the following areas:*

1) *The granularity of the information provided in the WMPs (such as High Fire Threat District maps, or Geographical Information Systems data);*

As one of the largest publicly owned, locally governed electric utilities in California, SMUD serves over 600,000 customers in its 900 square mile service territory in the Sacramento County area. It also operates a federally licensed hydroelectric project in El Dorado County known as the Upper American River Project (UARP). SMUD's goal is to deliver safe, reliable, affordable and environmentally sustainable energy to its customers.

SMUD's Wildfire Mitigation Plan (WMP) identifies over sixty programs in place to address existing ignition risks. These programs support strategies involving fuels management, operational protocols, inspection and maintenance, system hardening, situational awareness, and the use of emerging technologies.[1] These programs are identified and prioritized to expeditiously and efficiently meet SMUD's greatest areas of risk.

In operating its vertically integrated electric systems, SMUD understands that there are many risk factors including the risk of equipment related ignition that could lead to a potential wildfire event. SMUD has processes and controls in place to ensure that these systems operate safely and continually assesses and reviews current practices through an enterprise-wide risk assessment process to determine gaps and additional mitigations where appropriate.

Our enterprise risk approach includes a comprehensive assessment using a bow-tie diagram to identify SMUD's specific wildfire risk exposure, building its unique wildfire risk profile. SMUD's risk profile is then reviewed against existing mitigations and controls. A gap analysis is conducted through subject matter expert collaboration, stakeholder meetings, comparisons against industry standards and best practices and through tabletop exercises.

Comments Received After 4/15/2020 Meeting

SMUD's risk assessment is also informed by the California Public Utility Commission (CPUC) High Fire Threat District (HFTD) map, wildfire mitigation planning and public safety power shut-off activities, as well as many of the electric distribution industry practices the CPUC establishes through its General Orders. For example, SMUD participated in the development of the CPUC's statewide Fire Map. Acting as the lead for our service territory SMUD worked with expert consultants to identify the appropriate risk levels and recommend treatment within the HFTD map; these recommendation were stringently reviewed by an industry peer group and a group of nationwide experts led by CalFire. We also used the CalFire FRAP map (which portrays fire risks based on all factors) and have worked with our local fire agencies to identify specific areas within SMUD's service area that could present a higher ignition risk.

These fire risk maps served as foundations, along with GIS location data, fuel and weather data, and historical fire experience, for defining SMUD's wildfire risk profile. SMUD has a lower wildfire risk profile than other areas in the State that suffered destructive wildfires in recent years, largely due to its more urban environment, flatter terrain, grasslands and other fuel sources outside forested areas, fewer hot summer wind events, and developed relationships with our public safety partners. However, the UARP is located in Tiers 2 and 3 of the HFTD. Although, this area is not densely populated and SMUD operates only limited miles of distribution facilities in this area, which lines are largely designed to serve its own project operations, SMUD recognizes the greater potential for ignition risk in this area as well as the potential impact that PG&E's operations could have on SMUD's facilities. SMUD has prioritized the higher risk areas within its service area and the UARP for prevention and mitigation measures.

SMUD urges the WSAB to recognize that even utilities operating facilities in the same area may have varying fire risk profiles stemming from those operations. These differences can stem from characteristics such as different facility age and design, as well as ongoing inspection and maintenance practices. While collaboration and communication among utilities is critical, including the sharing of experiences and best practices, mitigation approaches that are appropriate for each utility may differ and metrics for measuring the success of these approaches in reducing individual utility risks must be tailored for the utility's risk profile. This is clearly exemplified in how a utility may approach system hardening or situational awareness activities. Where investment of millions of dollars for densely distributing cutting edge camera technologies in one service area makes sense based on potential risk drivers and experience, those monies would be better applied for inspection or hardening programs in other service areas. To approach wildfire mitigation planning in any other manner risks forced investments in measures that may be less effective for a utility necessarily limiting resources available to address potentially more pressing risks.

SMUD appreciates the framework developed by the CPUC for assessing the comprehensiveness of utility WMPs. We are considering the 52 capabilities as we prepare our 2020 WMPs, recognizing that many won't be applicable to our operations based on distinctions in financial structure, distinctions in available data collection and analytics, and the appropriateness of different index measures. Likewise, SMUD is closely following the CPUC's retention of qualified independent evaluators (QIE) for the IOU plans, but again, recognizes that pursuant to statute the QIE plays different roles for the IOUs than for POUs. SMUD retained Navigant to assess its WMP and after a comprehensive review

process that included site visits and a comparison of SMUD's programs to the IOU approaches, Navigant's experts concluded that SMUD's plan was comprehensive and met statutory requirements as well as industry standards and practices.

2) *Each utility's operational protocols to proactively de-energize circuits, even if these protocols are not called "Public Safety Power Shutoff" events;*

SMUD maintains and is continuously updating power system and distribution system operational standards for de-energizing lines in response to immediate threats to safety, including threats of wildfire. These procedures define the criteria operators must take into consideration to determine if de-energization is appropriate. Factors to consider include red flag warning status, high temperatures including lengths of heat waves, extremely low humidity, low fuel moisture content, projected/actual wind speeds, and localized operating conditions. Decisions are made based on observed real-time conditions by personnel patrolling the facilities.

SMUD maintains ongoing relationships with its local fire agencies, first responders and local agencies, in addition to participating on fire safe councils. We also have conducted extensive outreach to these entities and our customers, including to organizations representing our Access and Functional Needs populations. SMUD maintains an emergency communications program and is undertaking a review of support provided to its MedRate and other vulnerable populations. These programs focus on regular communication and education; with the focus on preparing our communities for potential events and keeping them informed if an event were to materialize. SMUD has a long history of providing support to our community during exigent times, but we cannot guarantee the constant flow of power. We work with our customers to help ensure that in the event of an outage, planned or otherwise, they have the appropriate precautions in place, and we do our best to restore power as quickly and safely as possible.

3) *A broad understanding of sectionalizing capability in the event of proactive de-energization in order to expedite restoration; and*

SMUD has designed its system to minimize the impact to customers from any type of outage situation. Our distribution circuits are considered to be short, and feature a substation circuit breaker, with multiple fused lateral tap lines. This is typical of many electric utilities in the United States. Substation breakers are paired with protective relays that monitor the current and operate the breaker when necessary. Reclosing is enabled to improve circuit reliability. However, reclosing is disabled for certain circuits during fire season, under high fire threat and severe weather conditions.

A majority of SMUD's urban distribution lines are automated and some have automated line reclosers installed to improve reliability. Line Reclosers are typically installed mid-circuit on the mainline to minimize impacted customers for close to end-of-line faults. In rural areas, the majority of lines are not automated, therefore de-energizing, and re-energizing has to be done manually, by a troubleshooter.

To de-energize small segments of circuits (or tap lines), a troubleshooter has to manually open the fused cut-outs feeding the impacted area requiring de-energizing. For a large area, multiple troubleshooters may be called upon to assist de-energizing the area. Prior to re-energizing, the troubleshooters have to patrol the main-line or tap-line to find potential problems and correct or

isolate them prior to closing the breaker or fuse manually. Depending on the geographic scale of the circuit, this may take a long time to accomplish.

4) *As we are aware that many munis/coops are already implementing their fire response strategies, we would also very much welcome any lessons learned to date.*

During the King fire in 2014 SMUD's 230kV transmission line right of way vegetation management's implementation of the national industry standard "wire zone border zone" program provided a fire break that helped responders to contain the spread of the blaze. SMUD has continued to enhance its vegetation management practices.

During the unprecedented October 2019 windstorms in Northern/Central California, SMUD personnel were on the ground allowing real-time responses to changing events. We identified improvements in internal and external communication and decision-making processes. We were also able to prioritize potential measures to address risk areas identified through this event.

SMUD is considering several pilot projects to test the effectiveness of new technologies, equipment and methodologies in reducing ignition risk in SMUD's service area and UARP. SMUD has incorporated remote sensing technologies, such as LiDAR, Ortho & Oblique Imagery, andhyper-spectral imagery to enhance its inspection and vegetation management planning, and is exploring additional camera applications for situational awareness and other opportunities. We also have been exploring potential applications for different equipment and system design options. With changing economic conditions and uncertainties, it is more critical than ever to ensure the feasibility of potential mitigation measures for SMUD's system and customers prior to adoption and investments of resources.

In conclusion, SMUD started taking steps to ensure the safety and reliability of its electric system long before the law mandated specific wildfire mitigation planning. We are continuing to prioritize ignition prevention measures that address our greatest wildfire risks, and are looking at opportunities to further enhance our inspection and maintenance, vegetation management, design and operations activities in high risk areas.

We appreciate the opportunity to provide this input. If you have any questions or we can be of any assistance going forward please don't hesitate to contact me.

Joy Mastache
Senior Attorney, Office of the General Counsel
w.916-732-5906 | c.209-765-3421 | **joy.mastache@smud.org**

SMUD | Powering forward. Together.
6201 S Street, Mail Stop B406, Sacramento, CA 95817
P.O. Box 15830, Sacramento, CA 95852-0830

Confidentiality Notice: The information in this email is for the intended recipient(s) alone. It may have confidential information or information protected by the attorney-client privilege, attorney work product doctrine, or other privilege. If you are not an intended recipient, do not copy, distribute or take any action that relies on it. Instead, notify me immediately by reply email, and then destroy this email.

Comments Received After 4/15/2020 Meeting

[1] In response to potential wildfire risk, SMUD identified a series of measures intended to prevent wildfires from occurring, minimize the spread of any fire that does occur and improve the resiliency of its system. These measures include installation of Cal Fire approved exempt equipment to reduce the risk of sparking within the Cal Fire State Responsible Area, enhanced inspection and maintenance programs, consideration of ignition resistant construction including covered conductors and undergrounding, increased monitoring of and identified responses to fire conditions, including operational procedures for the de-energization of lines during high fire conditions and operational protocols for disabling the use of reclosing functionality on SMUD's transmission lines and on SMUD's distribution lines in certain areas during fire season. SMUD also takes a proactive approach to vegetation management with respect to its electric system. In addition, SMUD has installed additional weather stations in some of its transmission corridors and substations for increased situational awareness, and has continued coordination and collaboration with local agencies and first responders as well as vulnerable populations. These measures are reflected in the WMP adopted by SMUD's Board of Directors in October 2019 and submitted to the WSAB April 3, 2020.