

2025 WMP Update

Joint IOU Covered Conductor Working Group Report

Introduction:

In the 2021 WMP Update Final Action Statements, Energy Safety ordered the Joint IOUs¹ to coordinate to develop a consistent approach to evaluating the long-term risk reduction and cost-effectiveness of covered conductor (CC) deployment, including 1) the effectiveness of CC in the field in comparison to alternative initiatives and 2) how CC installation compares to other initiatives in its potential to reduce PSPS risk. The utilities formed a Joint IOU Covered Conductor Working Group and developed an approach and preliminary milestones to enable the utilities' to better discern the long-term risk reduction effectiveness of CC to reduce the probability of ignition, assess its effectiveness compared to alternative initiatives, and assess its potential to reduce PSPS risk in comparison to other initiatives. The approach consisted of multiple workstreams including:

- Benchmarking
- Testing
- Estimated Effectiveness
- Recorded Effectiveness
- Alternatives Comparison
- Potential to Reduce PSPS Risk; and
- Costs

In the 2022 WMP Update filings and subsequently in the 2023-2025 WMP, the utilities produced a joint report that provided an update on their progress for each of the workstreams, added efforts, and preliminary plans for 2023.

In the 2022 WMP Update Final Decisions, Energy Safety identified Areas of Continued Improvement and Required Progress (ACI) for all utilities to expand this working group to include:

- 1) Joint CC Lessons Learned
- 2) CC Maintenance and Inspection (M&I) Practices; and
- 3) New Technologies Implementation

Given these directions, the utilities expanded the Joint IOU Covered Conductor Working Group to include ten workstreams and began meeting on the new workstreams in Q3/Q4 2022. Below is the summary of process made in 2023 to address the commitments identified in the report.

Overview:

In 2023, the utilities conducted workshops across the various workstreams. New workstreams evaluated CC M&I best practices, assess data and information on effectiveness of new technologies and shared practices and implementation strategies, and review studies on CC's ability to reduce PSPS impacts. The utilities continued to further benchmark efforts, improve methods for estimating and measuring effectiveness, and continue to track and compare unit costs. Below, the utilities describe the progress made on each workstream.

¹ In this progress report, "Joint IOUs," "IOUs," or "utilities" refers to SDG&E, PG&E, SCE, PacifiCorp, BVES, and Liberty.

Testing:

In our 2023-2025 WMPs, the utilities committed to conducting meetings and workshops to assess the testing results, determine if any additional tests are needed, and determine if any mitigations are warranted such as changes to materials, construction methods, or inspection practices. The Joint IOUs held bi-weekly meetings to review testing results. In addition, workshops were held with Energy Safety to discuss the following topics relating to testing:

- May 2023 – Corrosion testing;
- June 2023 – Aging Susceptibility testing; and
- July 2023 – Status of IOUs remaining testing results

Corrosion testing resulted in minor aluminum degradation below the covering following the corrosion testing, though copper CC had similar performance as the exposed bare conductor. SCE continues to inspect in-service installations of CC for monitoring the applied performance of the conductor. As a result of the discussions and outcome of the supplemental testing results, the Joint IOUs concluded that no additional testing was warranted at this time. All results have been submitted to OEIS. The Joint IOUs have concluded this workstream.

PG&E has incorporated the lessons learned from the testing results in 2024 update to PG&E's Overhead Assessment Inspection Job Aid TD-2305M-JA02, as described in response to ACI PG&E-23-08.

Furthermore, please also see responses to ACI PG&E-23-08 for PG&E's planned evaluation of additional conductor types to mitigate water intrusion. This effort will be conducted outside of the Joint IOU efforts.

Recorded and Estimated Effectiveness:

The joint IOUs have met monthly in 2023 to discuss the results of recorded and estimated effectiveness for covered conductor. These discussions have demonstrated that while there is a need to align consistent methods, based on the individual constraints each utility faces, some of the drivers and data will ultimately be different. The Joint IOUs will continue to compare risk drivers, the results of recorded and estimated effectiveness, identify current alignment and opportunities for alignment and understand differences.

Alternatives, New Technology, Benchmarking and PSPS:

The team decided to combine the alternatives, benchmarking, PSPS and new technologies workstreams. The team met bi-weekly to discuss the various technologies being considered and/or adopted by each Joint IOU, shared lessons learned, and discussed if these new technologies had any impact on PSPS. As a workstream the team identified questions on some of the new technologies for benchmarking. The team is finalizing the questions and plan to complete the benchmarking survey in 2024.

The Joint IOUs held three workshops with OEIS to discuss these workstreams:

- June 2023 – Distribution Fault Anticipation (DFA) – Discuss implementation strategies, practices and effectiveness
- July 2023 – Early Fault Detection (EFD) – Discuss implementation strategies, practices and effectiveness

- August 2023 – Rapid Earth Fault Current Limited (REFCL) – Discuss implementation strategies, practices and effectiveness

During the workshops the Joint IOUs shared how each utility was using the technology, the current status of implementation, and impacts to PSPS. No additional technology is being considered, therefore this workstream has concluded.

M&I Practices:

In 2023, the utilities met monthly to discuss utility specific general and CC M&I practices and presented the materials in a workshop with Energy Safety on July 24, 2023. At the conclusion of the workshop, it was determined that no additional workshops were necessary.

For SCE, please see the response to ACI SCE-23-11, regarding CC inspection and maintenance.

In 2023, PG&E worked on the update of the Electric Distribution Overhead inspection Job Aid and in December released the updated Job Aid TD-2305M-JA02 that includes additional guidance for the inspection of Covered Conductor.

Costs:

In 2023, the utilities discussed the unit costs of CC and undergrounding and compared at a high level the different cost drivers. This discussion better informed the utilities of the differences behind the unit costs. The utilities meet regularly and will continue to share as information changes and costs are better defined with more installation.

Conclusion:

All of the utilities met regularly on all workstreams in 2023 and addressed all of the commitments identified in the 2023-2025 Joint IOU Covered Conductor Effectiveness Report. In addition, all of the utilities developed standing monthly Joint IOU meetings, which created a forum to share updates on wildfire topics and to stay updated on key developments. The utilities also developed an undergrounding working group to discuss challenges with undergrounding and related lessons learned. These forums will allow the joint utilities to continue data sharing and knowledge transfer on important wildfire mitigation topics.