

DISCUSSION TOPICS FOR FEBRUARY 26-27TH TECHNICAL WORKSHOPS

Day 1

What does Commission approval of WMPs mean?

- The WMP statute assigns the following roles to the Commission:
 - Public Utilities Code Section 8386(d) The commission shall accept comments on each plan from the public, other local and state agencies, and interested parties, and verify that the plan complies with all applicable rules, regulations, and standards, as appropriate.
 - Section 8386(e) The commission shall approve each plan within three months of its submission, unless the commission makes a written determination, including reasons supporting the determination, that the three-month deadline cannot be met and issues an order extending the deadline. Each electrical corporation's approved plan shall remain in effect until the commission approves the electrical corporation's subsequent plan. At the time it approves each plan, the commission shall authorize the utility to establish a memorandum account to track costs incurred to implement the plan.
 - Section 8386(f) The commission's approval of a plan does not establish a defense to any enforcement action for a violation of a commission decision, order, or rule.
 - Section 8386(g) The commission shall consider whether the cost of implementing each electrical corporation's plan is just and reasonable in its general rate case application.
- What is your interpretation of SB 901's intent with respect to the role that CPUC adoption of utility WMPs will have on: (a) compliance and (b) costs associated with WMPs?
- What open questions do you think currently exist with how SB 901 will be interpreted by the Commission that you believe need to be answered as WMPs are reviewed and adopted?
- What do parties advocate the Commission state in its decision addressing the WMPs?
 - Will Commission approval of WMPs result in new compliance requirements?
 - If so, to the extent these new compliance requirements result in programs not already funded and reviewed through GRCs, how should the Commission align approval of the WMPs with respect to the direction in §8386(g) that reasonableness reviews are to take place in GRCs?
 - Is there a way to isolate review/approval of WMP programs without pre-judging reasonableness and cost? How?
 - If not, should the scope of Commission review/approval of WMPs be limited in any way? How?
 - For example, should any reference to the scope of IOU programs be removed from WMPs (e.g. number of miles of conductor replacements or number of trees to be removed)? If not, should the Commission decision approving WMPs explicitly state that the reasonableness on scope and degree of IOU mitigation programs (to the extent they represent new costs not previously considered) is not considered in this proceeding?
- §8386(a) mandates that the objective of WMPs should be to "minimize the risk of **catastrophic wildfire**" posed by electrical lines and equipment. Does the Commission need to define what a "catastrophic wildfire" is?

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- Should the initial WMPs be prioritized to focus on the prevention of catastrophic wildfires?
 - If so, should there be a limitation placed on the programs the Commission approves in the WMPs (i.e. programs that would help identify/mitigate the fire spread characteristics of a utility-caused ignition, but not programs aimed at preventing ignitions in general)?
- What role do performance metrics play in evaluating the various programs in IOU WMPs?
 - Can approval be provided without a baseline to compare performance metrics against?
 - Is there a common set of performance metrics that can be applied?
 - What are they? Do all IOUs collect the data/information necessary to populate and evaluate these metrics?
 - Should these metrics be refined through the S-MAP/RAMP proceedings?
 - Are there existing metrics used in RAMP that can help inform WMP program evaluation? If so, what are they and to what extent are they applicable?
 - Should WMP programs be evaluated as a wholesale operations test for S-MAP and RAMP?
 - How can/should the WMP programs and their evaluation be aligned with RAMP?
 - Should S-MAP and RAMP processes be refined to incorporate information from the WMP process? How would this be done?

Day 2 (Morning Session)

Vegetation Management Issues

- What is the point of diminishing return for increasing vegetation clearance requirements?
 - Have IOUs assessed this? How? What studies and information can they provide?
 - Is risk reduction analysis related to increasing veg. clearances an issue that can be studied through the RAMP process? If so, how?
 - Have the IOUs already studied this? If so, what have they learned?
- What information and databases are the IOUs currently using to inform and manage compliance and performance of veg. management programs?
 - Should there be a standardized database to inform future veg. management policy and decisions? If so, can existing IOU databases be leveraged?
 - To what extent would unique characteristics or permutations of data collection process be needed to effectively address unique challenges of differing IOU service territories?
- Enhanced veg. inspections.
 - What are utilities currently doing?
 - Are there appreciable differences between what's done on transmission versus distribution circuits?
 - What are the limitations?
 - How could databases and data collection methodologies be modified to better support enhanced inspections (e.g. LiDAR, spectral imaging, etc.)?
- Effects of utility veg. management activities:

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- How do IOUs currently assess and address the potential adverse impacts from their veg. management efforts?
 - Erosion
 - Wind-shear
 - Disturbance of local habitat
 - Watershed impacts
- Hazard trees:
 - How do the IOUs currently identify hazard trees?
 - What programs do IOUs currently have in place to abate hazard trees?
 - What data or studies have been conducted in this regard?
- Overhanging vegetation:
 - What impact does vegetation overhang (beyond mandated clearance requirements) have on hazards and utility ignition risk?
 - Should the Commission implement regulatory requirements to eliminate all overhang in the High Fire-Threat District (HFTD)?
- Vegetation-caused outages:
 - Do IOUs have programs in place to identify and study these occurrences? If so, what are they doing and what have they learned?
 - Databases?
 - Inspection tools and protocols?
 - Species- or region-specific knowledge gained? How is that knowledge operationalized through existing veg. management programs or enhancements?
 - Should there be requirements adopted to mandate these types of assessments? How would this be done?

Day 2 (Afternoon Session)

Conductor Issues

- Covered conductors:
 - What case studies and pilot programs have the IOUs conducted? What were the results?
 - Are there analyses, case studies or pilot programs from other entities or experts? if so, identify them.
 - What are the applicable uses (what conditions, situations, construction arrangements, voltages, etc.)?
 - Are there limitations or situations where covered conductors should **NOT** be used?
 - What wildfire risk drivers are mitigated by installing covered conductors?
 - How is that amount of risk reduction calculated? Is this consistent with S-MAP?
 - To what extent does the installation of covered conductor mitigate the need for and reduce the cost of veg. management activities?
 - What are the impacts on pole loading and design? How are IOUs accounting for this?
 - What are the different types of coatings utilities have explored for covered conductors?
 - Are all the coatings of covered conductors proposed in utility WMPs the same? If not, what are the differences?

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- What type of testing and studies have utilities performed to assess the fire resistance of covered conductor coatings?
- How will utilities ensure that the coating on the covered conductors they propose to install doesn't propagate fires and increase utility wildfire risk?
- Have utilities studied the effect of fault conditions on covered conductor coatings?
 - What have they learned and what control measures are in place to monitor and mitigate any potential adverse impacts?
- What is the useful life of the covering? Life expectancy of the covered conductor?
 - How does this compare to bare conductors?
 - What are the lifecycle costs of covered versus bare conductors?
- How do IOUs assess installation of covered conductors versus undergrounding?
- Conductor hardware/splicing:
 - Have IOUs conducted studies to determine issues associated with splices (i.e. automatic splices) or other conductor hardware that could lead to an ignition?
 - What are the results?
 - What design, construction, or maintenance changes have been implemented as a result?
 - What operational changes have been implemented as a result?
 - Have replacement programs been initiated? If so, how are replacement priorities determined? What's the status? How long until completion?
 - Should the Commission ban the installation of automatic splices?
 - Should the Commission require IOUs to implement conductor replacement programs that are focused on identifying and removing existing automatic splice installations?
 - Do IOUs currently have programs in place to do this? If so, what is the status?
 - Do IOUs have an inventory of their splices in the field (type, age, etc.)? When did they begin collecting this information? What data related to splices are collected? Where is the data kept and what business practices (construction, design, operations, instrumentation, etc.) has it influenced?
 - Should the CPUC consider standardized collection of this type of data? How?
- Inspection/Detection and protection devices:
 - What types of equipment or devices are IOUs currently using to inspect and detect issues with conductors?
 - What new technologies or devices are promising in this regard?
 - Tension monitoring devices?
 - Relay technologies and settings (e.g. fast-curve relays)?
 - How do IOUs assess post-installation condition of conductors?
 - Are there methods to improve these assessments? What are the IOUs doing in this regard?
 - What type of data collection/information would be useful in making these assessments?
- Wire-down study and prevention:
 - What are IOUs currently doing to study and prevent wire-down events?
 - What have they learned?
 - What works? What doesn't work?

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- What are IOUs doing to mitigate the occurrence of wire-down events where the conductor remains energized?
 - Possibly discuss the SCE algorithm
- What type of fault detection technology are the IOUs currently employing?
 - What are the advancements in this field?
- Can the IOUs use fault record data to better understand in-service condition of existing conductors?
 - What are IOUs currently doing on this topic?
 - Should the detection, recording, and analysis of fault data be standardized?
 - If so, what is the essential data needed?
 - Is the infrastructure currently in place to do this statewide? If not, should programs focused on deployment of these devices and technology be prioritized in WMPs?