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Southern California Edison
R.18-10-007 – SB 901

DATA REQUEST SET M G R A - S C E - 0 0 1

To: MGRA
Prepared by: Andrew Garcia
Job Title: Senior Manager
Received Date: 3/3/2019

Response Date: 3/6/2019

Question 01: How many individual distribution and transmission circuits have elements within HFTD Tier 2 and Tier 3 (some portion of the circuit passes through HFTD Tier 2 or Tier 3)? Please specify answers for distribution and transmission circuits separately.

Response to Question 01:

SCE has 1,111 distribution circuits and 401 transmission circuits that have elements (i.e., equipment) within Tier 2 and/or Tier 3.

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Question 02: What is the current average length in miles of the distribution and transmission circuits specified in question MGRA-1? Please specify answers for distribution and transmission circuits separately.

Response to Question 02:

SCE interprets this question to be asking for the average (i.e., mean) length of the portion of the circuits specified in MGRA-1 that fall within Tier 2 and/or Tier 3. Given this interpretation, the current average length of the distribution circuits is approximately 8.9 miles, and the average length of the transmission circuits is approximately 13.7 miles.

Southern California Edison
R.18-10-007 – SB 901

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Response Date: 3/6/2019

Question 03: What is the current median length in miles of the distribution and transmission circuits specified in question MGRA-1? Please specify answers for distribution and transmission circuits separately.

Response to Question 03:

SCE interprets this question to be asking for the median length of the portion of the circuits specified in MGRA-1 that fall within Tier 2 and/or Tier 3. Given this interpretation, the current median length of the distribution circuits is approximately 3.6 miles, and the median length of the transmission circuits is approximately 6.5 miles.

**PACIFIC GAS AND ELECTRIC COMPANY
Wildfire Mitigation Plans
Rulemaking 18-10-007
Data Response**

PG&E Data Request No.:	MGRA_001-Q04		
PG&E File Name:	WildfireMitigationPlans_DR_MGRA_001-Q04		
Request Date:	March 3, 2019	Requester DR No.:	001
Date Sent:	March 7, 2019	Requesting Party:	Mussey Grade Road Alliance
PG&E Witness:		Requester:	Joseph W. Mitchell

SUBJECT: THE FIRST SET OF QUESTIONS PERTAINS TO THE LENGTH OF TRANSMISSION AND DISTRIBUTION CIRCUITS IN THE UTILITY HFTD TIER 2 AND TIER 3 TERRITORY AND THE DEGREE TO WHICH THEY CAN BE INDIVIDUALLY MONITORED AND CONTROLLED.

QUESTION 04

What is the current average length in miles of the top 10% longest distribution and transmission circuits specified in question MGRA-1? Please specify answers for distribution and transmission circuits separately.

ANSWER 04

PG&E interprets this question as applying to overhead circuits within PG&E's service area. These answers are subject to change as the system is reconfigured or as lines are constructed or removed.

As of March 6, 2019, the average length of the top 10% longest overhead distribution circuits specified in response to MGRA_001, Q01 is approximately 806,700 feet.

As of March 6, 2019, the average length of the top 10% longest overhead transmission circuits specified in response to MGRA_001, Q01 is approximately 271,700 feet.

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To: MGRA
Prepared by: Andrew Garcia
Job Title: Senior Manager
Received Date: 3/3/2019

Response Date: 3/7/2019

Question 05: How many circuits specified in MGRA-1 are planned for resectionalization into smaller circuit segments in 2019 and 2020 time frame? What will be the average segment length before and after such modifications, if any are planned?

Response to Question 05:

SCE objects to the question because it is beyond the scope of the proceeding. SCE's 2019 Wildfire Mitigation plan is comprised of wildfire mitigation programs and activities SCE plans to undertake in 2019 to reduce wildfire risk. Notwithstanding this objection, SCE responds as follows:

SCE interprets this question on resectionalizing circuits in relation to RARs which provide the capability to sectionalize faulted circuitry and segment circuits related to Public Safety Power Shutoff events. SCE intends to add at least 50 new RARs to SCE HFRA circuitry in 2019, as detailed in WMP Chapter 4.3.3.5: Protection and Isolation. Currently, there are approximately 46 circuits listed in MGRA-1 which have been identified for RAR applications in 2019. These 2019 projects are presently in the design phase. With the existing RARs on these circuits the average segment length is approximately 16 miles, and following the expected 2019 RAR installations the average segment length is expected to be approximately 11 miles.

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Question 06: What are longer term plans for circuit division into smaller segments for the 2020-2025 time frame?

Response to Question 06:

SCE objects to the question because it is beyond the scope of the proceeding. SCE's 2019 Wildfire Mitigation plan is comprised of mitigation and activities SCE plans to undertake in 2019 to reduce wildfire risk. Notwithstanding this objection, SCE responds as follows: At this time, SCE does not have plans in the 2020-2025 timeframe to divide circuits into smaller sections for the purpose of wildfire mitigation.

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To: MGRA
Prepared by: Andrew Garcia
Job Title: Senior Manager
Received Date: 3/3/2019

Response Date: 3/7/2019

Question 07: How many of the circuits specified in MGRA-1 can currently be remotely de-energized or re-energized via SCADA? Please specify answers for distribution and transmission circuits separately.

Response to Question 07:

All distribution circuits specified in MGRA-1 can be remotely de-energized and re-energized via SCE's existing SCADA systems. Twenty of the transmission circuits specified in MGRA-1 have at least one terminal without remote capability to be de-energized or re-energized via SCE's existing SCADA systems. Transmission circuits may have more than one source of electricity and operate networked as opposed to radially. As such, all of the associated circuit breakers for each source would need to be opened to de-energize the circuit. Some transmission lines have sources or terminals which are not operated by SCE, where the source or terminal may be a neighboring utility or a generating facility.

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To: MGRA
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Response Date: 3/7/2019

Question 08: How many of the circuits specified in MGRA-1 will have capability to be remotely de-energized or re-energized via SCADA after 2019-2020 work is completed? Please specify answers for distribution and transmission circuits separately, and include any new circuits created by sectionalization of existing circuits.

Response to Question 08:

SCE objects to the question because it is beyond the scope of the proceeding. SCE's 2019 Wildfire Mitigation plan is comprised of mitigation and activities SCE plans to undertake in 2019 to reduce wildfire risk. Notwithstanding this objection, SCE responds as follows. All distribution circuits specified in MGRA-1 can be remotely de-energized and re-energized via SCE's existing SCADA systems. After certain 2020 work unrelated to wildfire mitigation is completed, eighteen of the transmission circuits specified in MGRA-1 will have at least one terminal without remote capability to be de-energized or re-energized via SCE's existing SCADA systems. Transmission circuits may have more than one source of electricity and operate networked as opposed to radially. As such, all of the associated circuit breakers for each source would need to be opened to de-energize the circuit. Some transmission lines have sources or terminals which are not operated by SCE, where the source or terminal may be a neighboring utility or a generating facility. SCE has no plans to create new circuits by sectionalizing existing circuits for the purpose of wildfire mitigation at this time.

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To: MGRA
Prepared by: Andrew Garcia
Job Title: Senior Manager
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Response Date: 3/7/2019

Question 09: How many of the circuits specified in MGRA-1 can currently reset recloser settings via SCADA? Please specify answers for distribution and transmission circuits separately.

Response to Question 09:

SCE interprets this question for the ability to “reset recloser settings via SCADA” to be asking whether SCE can remotely control the reclosing relay making it automatic or blocked. Given this interpretation, all distribution circuits specified in MGRA-1 can reset recloser settings via SCE’s existing SCADA.

It is important to note that not all transmission circuits have reclose relays due to system stability, and utility intertie concerns. However, twenty of the transmission circuits specified in MGRA-1 that do have reclose relays, have at least one terminal without remote capability to reset recloser settings via SCE’s existing SCADA systems. Transmission circuits may have more than one source of electricity and operate networked as opposed to radially. As such, all of the associated circuit breakers for each source would need to be opened to de-energize the circuit. Some transmission lines have sources or terminals which are not operated by SCE, where the source or terminal may be a neighboring utility or a generating facility.

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To: MGRA
Prepared by: Andrew Garcia
Job Title: Senior Manager
Received Date: 3/3/2019

Response Date: 3/7/2019

Question 10: How many of the circuits specified in MGRA-1 will have capability to reset recloser settings via SCADA after 2019-2020 work is completed? Please specify answers for distribution and transmission circuits separately, and include any new circuits created by sectionalization of existing circuits.

Response to Question 10:

SCE objects to the question because it is beyond the scope of the proceeding. SCE's 2019 Wildfire Mitigation plan is comprised of mitigation and activities SCE plans to undertake in 2019 to reduce wildfire risk. Notwithstanding this objection, SCE responds as follows.

SCE interprets this question for the "capability to reset recloser settings via SCADA" to be asking whether SCE can remotely control the reclosing relay making it automatic or blocked. Given this interpretation, all distribution circuits specified in MGRA-1 can reset recloser settings via SCE's existing SCADA.

It is important to note that not all transmission circuits have reclose relays due to system stability, and utility intertie concerns. After certain 2020 work unrelated to wildfire mitigation is completed, eighteen of the transmission circuits specified in MGRA-1 that currently have reclose relays will have at least one terminal without remote capability to reset recloser settings via SCE's existing SCADA systems. Transmission circuits may have more than one source of electricity and operate networked as opposed to radially. As such, all of the associated circuit breakers for each source would need to be opened to de-energize the circuit. Some transmission lines have sources or terminals which are not operated by SCE, *e.g.*, where the source or terminal may be a neighboring utility or a generating facility. SCE has no plans to create new circuits by sectionalizing existing circuits for the purpose of wildfire mitigation at this time.

Southern California Edison

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DATA REQUEST SET M G R A - S C E - 0 0 1

To: MGRA

Prepared by: Thomas Brady

Job Title: Senior Advisor

Received Date: 3/3/2019

Response Date: 3/7/2019

Question 11: How many of the circuits specified in MGRA-1 have a weather station within 1/4 mile of some portion of the circuit? Please specify answers for distribution and transmission circuits separately.

Response to Question 11:

The data stated in this question is current as of 3/5/2019. 91 distribution circuits have a weather station within 1/4 mile of some portion of the circuit. 35 transmission/subtransmission circuits have a weather station within 1/4 mile of some portion of the circuit. The number of distribution and transmission circuits that have a weather station within 1/4 mile of some portion of the circuit will increase as wildfire mitigation efforts continue.

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DATA REQUEST SET M G R A - S C E - 0 0 1

To: MGRA
Prepared by: Thomas Brady
Job Title: Senior Advisor
Received Date: 3/3/2019

Response Date: 3/6/2019

Question 12: How many of the circuits specified in MGRA-1 will have a weather station within 1/4 mile of some portion of the circuit after 2019-2020 work is completed? Please specify answers for distribution and transmission circuits separately, and include any new circuits created by sectionalization of existing circuits

Response to Question 12:

SCE objects to the question to the extent it calls for information beyond the scope of SCE's 2019 calendar-year WMP. Notwithstanding the foregoing objection, SCE responds as follows: Please refer to MGRA-SCE-001 Question 11 for the number of distribution and transmission circuits within 1/4 mile of some portion of the circuit as of 3/5/2019.

2020 wildfire mitigation activities, including those associated with weather stations, will be considered in the 2020 WMP proceeding, and are not within the scope of this proceeding. At this time, SCE's meteorologists are determining specific weather station locations for future installations. As such, the number of circuits that will have weather stations within 1/4 mile at the end of 2020 is still being determined.

The objective of the weather station program is to create a dense network of strategically placed weather stations to cast a comprehensive mesonet that will provide high accuracy, localized weather data for HFRA circuit infrastructure. The current plan will allow for a majority of the circuits within HFRA to have a quality, publicly-available weather station (e.g. SCE, Remote Automated Weather Station (RAWS), or National Weather Service (NWS) weather station) within one mile of the circuit. SCE estimates it will take up to 850 weather stations to achieve this goal.

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DATA REQUEST SET M G R A - S C E - 0 0 1

To: MGRA
Prepared by: Peter Lee
Job Title: Senior Business Analyst
Received Date: 3/3/2019

Response Date: 3/6/2019

Question 13: What tree species are regarded to be “at risk” or “reliability” trees in the utility service area? If this is a long list, restrict to the top ten most likely to be associated with outages.

Response to Question 13:

“At risk” or “reliability” trees are based on the tree’s hazard characteristics rather than simply a tree species.

The following tree species have been linked to the largest number of outages associated with SCE utility equipment over the past 3 years:

1. Palm Tree
2. Eucalyptus
3. Pine
4. Oak
5. Cedar
6. Ash
7. Sycamore
8. Elm
9. Cypress
10. Ficus

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DATA REQUEST SET M G R A - S C E - 0 0 1

To: MGRA

Prepared by: Peter Lee

Job Title: Senior Business Analyst

Received Date: 3/3/2019

Response Date: 3/7/2019

Question 14: Please give the fraction of total vegetation-caused outages are caused by fall-in of “at risk” or “reliability” tree species, by top ten species if available, averaging over the past five years. Provide the same for vegetation-caused ignitions. Restrict analyses to cases where the tree and all limbs were outside of the 12 foot trim zone. Also provide the total fraction of the same species within the utility tree database if available.

Response to Question 14:

SCE objects to the question as it is overly broad, unduly burdensome, and because it is beyond the scope of this proceeding. SCE’s 2019 Wildfire Mitigation Plan (WMP) is comprised of mitigation and activities SCE plans to undertake in 2019 to reduce wildfire risk and historical data from the last five years is in many respects beyond the scope of the WMP. Notwithstanding this objection, SCE responds as follows.

The tables below provide the top 10 tree species that have been associated with outages by fall-in of “at risk” or “reliability” trees from 2016 to 2018 (and is not limited to events from “trees and limbs [that] were outside of the 12 foot trim zone”):

2016	
Tree Type	Interruption Count
Palm	290
Eucalyptus	56
Pine	49
Oak	28
Cedar	19
Ash	7
Elm	4
Ficus	4
Fir	4
Sycamore	4
Total	465

2017	
Tree Type	Interruption Count
Palm	191
Eucalyptus	89
Pine	69
Oak	47
Ash	13
Cedar	13
Elm	12
Cypress	8
Pepper	6
Athel	5
Total	453

2018	
Tree Type	Interruption Count
Palm	199
Eucalyptus	46
Oak	31
Pine	23
Elm	8
Sycamore	7
Cottonwood	5
Ash	4
Fir	4
Cedar	3
Total	330

The tables below provide the number of Tree Caused Circuit Interruptions (TCCI) from 2016 to 2018:

2016	
TCCI Category	Interruption Count
Vegetation Blown	496
Vegetation Overgrown	48
Other	1
Total	545

2017	
TCCI Category	Interruption Count
Vegetation Blown	477
Vegetation Overgrown	57
Total	534

2018	
TCCI Category	Interruption Count
Vegetation Blown	328
Vegetation Overgrown	83
Total	411

**Other – Not Caused by Vegetation

Regarding vegetation-associated ignitions, SCE records fire data in accordance with CPUC Decision 14-02-015, which established the Fire Incident Data Collection Plan for utilities. Pursuant to this decision, SCE Fire Incident Data records are not categorized by tree species nor limited to events from “trees and limbs [that] were outside of the 12 foot trim zone.”

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To: MGRA
Prepared by: Peter Lee
Job Title: Senior Business Analyst
Received Date: 3/3/2019

Response Date: 3/7/2019

Question 15: Are all trees of “at risk” or “reliability” species within the “strike zone” of utility equipment planned for trimming or removal? If arborist discretion is to be used, what factors will be used to determine which trees will be trimmed or removed, and what approximate fraction of “at risk” or “reliability” tree species will be trimmed or removed as enhanced vegetation management is implemented?

Response to Question 15:

All trees identified as “at risk” or “reliability” within the “strike zone” in 2019 will be planned for trimming and/or removal.

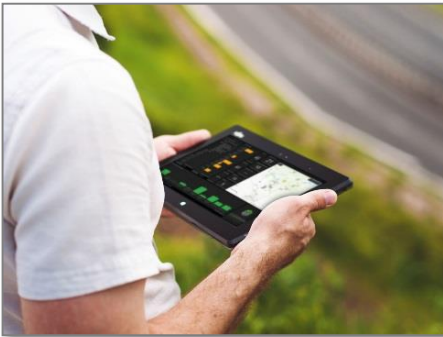
Factors and approximate fraction of “at risk” or “reliability” tree species are calculated through a risk matrix in a Tree Risk Assessment Tool, which takes into consideration:

- Overall Tree Condition
- Tree Defects
- Site Conditions
- Tree Lean
- Tree Height Factor
- Likelihood of Line Impact

Fulcrum App - Tree Risk Assessment Tool

New Utility Vegetation Management Tree Risk Assessment Tool

Hazard Tree characteristics that consider tree attributes and site attributes help indicate possible hazardous conditions posed on our equipment. These characteristics, of tree and site, are used to risk rank a Subject Tree. Both tree and site attributes may impact the stability of a tree and should be considered when performing a tree risk assessment. Information collected during a tree risk assessment will be captured on the Tree Risk Assessment Form and be submitted to Vegetation Management Compliance & Support (VMC&S) team. The assessment results will be captured in the Work Management System in order to track and manage the prescribed work or other mitigation.


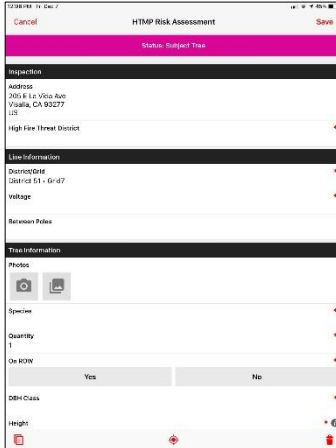
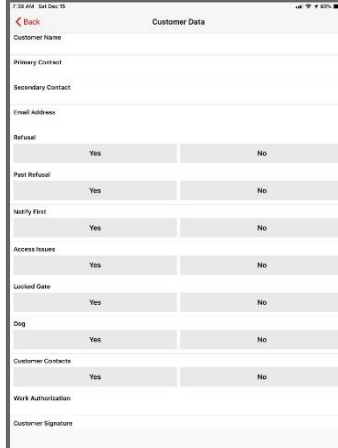
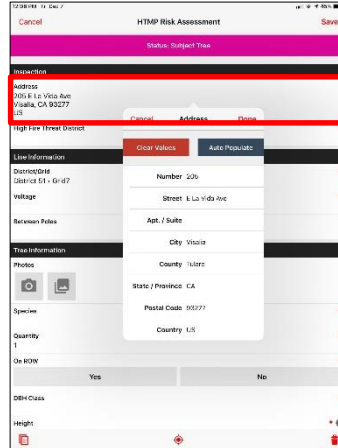


How the Tree Risk Assessment Data will be accessed / exchanged:

Field personnel will use a Fulcrum app on an iOS device. A daily extract file will be provided to VMC&S department from Fulcrum. VMC&S will update the Work Management System with the hazard data identified (tree characteristics and location information) in Fulcrum. Fulcrum will be used as an assessment tool and transaction system. The transactional data will be updated into the VM Work Management System as the system of record.

How to Use the Fulcrum App:

To aide in the determination of the likelihood of tree failure, the Fulcrum based Tree Risk Assessment App was developed to help users identify the risk based on critical information. Depending on how you answer the questions, the tool will calculate a risk rank score, and suggested priority. (* red star is a mandatory field)

Inspection Information			
<p>1. Hit the + button to start record</p> 	<p>2. Blank record with prefabbed address and last grid inspected</p> 	<p>3. Enter customer data if applicable</p> 	<p>4. Enter address</p> 

Inspection Information

4. Indicate whether or not it's a High Fire Threat District

Line Information

6. Select district or grid from the drop down list

7. Select circuit from the drop down list

Line Information

8. Select voltage classification

9. Select construction type

10. Select the photo icon to take pictures of the tree and/or tree defects

Tree Information

11. Identify Tree species classification (alphabetical order of common name)

12. Tree quantity

13. Indicate whether or not it's on or off ROW

HTMP Risk Assessment

Species: A-C • Cottonwood

Quantity: 1

On ROW: Yes No

DBH Class

Height

Age

Risk Matrix

Overall Tree Condition

HTMP Risk Assessment

Line Information

District/Grid: District 51 • Grid 7

Voltage: 4-21kV (distribution)

Distribution Line Details: Isolated Distribution

Between Poles: Bot 123456E and 123457E

Tree Information

Photos

Species: A-C • Cottonwood

Quantity: 1

On ROW: Yes No

DBH Class

Height

Age

Risk Matrix

Overall Tree Condition

HTMP Risk Assessment

Line Information

District/Grid: District 51 • Grid 7

Voltage: 4-21kV (distribution)

Distribution Line Details: Isolated Distribution

Between Poles: Bot 123456E and 123457E

Tree Information

Photos

Species: A-C • Cottonwood

Quantity: 1

On ROW: Yes No

DBH Class

Height

Age

Risk Matrix

Overall Tree Condition

14. DBH classification that fits routine, BB, DRI

15. Manually enter tree height

16. Tree Age (first component that is scored in the overall risk score)

HTMP Risk Assessment

Line Information

District/Grid: District 51 • Grid 7

Voltage: 4-21kV (distribution)

Distribution Line Details: Isolated Distribution

Between Poles: Bot 123456E and 123457E

Tree Information

Photos

Species: A-C • Cottonwood

Quantity: 1

On ROW: Yes No

DBH Class: 36+

Height

Age

Risk Matrix

Overall Tree Condition

HTMP Risk Assessment

Line Information

District/Grid: District 51 • Grid 7

Voltage: 4-21kV (distribution)

Distribution Line Details: Isolated Distribution

Between Poles: Bot 123456E and 123457E

Tree Information

Photos

Species: A-C • Cottonwood

Quantity: 1

On ROW: Yes No

DBH Class: 36+

Height: 55

Age

Risk Matrix

Overall Tree Condition

HTMP Risk Assessment

Line Information

District/Grid: District 51 • Grid 7

Voltage: 4-21kV (distribution)

Distribution Line Details: Isolated Distribution

Between Poles: Bot 123456E and 123457E

Tree Information

Photos

Species: A-C • Cottonwood

Quantity: 1

On ROW: Yes No

DBH Class: 36+

Height: 55

Age: Over Mature

Risk Matrix

Overall Tree Condition

Fulcrum App - Tree Risk Assessment Tool

HTMP Job Aid

Tree Information (cont.)	Risk Matrix	
<p>17. Descriptions of overall tree conditions</p>	<p>18. Assess the overall tree condition and score it appropriately</p>	<p>19. Identify the tree defects (not part of the overall score unless all tree defect scores add up to a higher score than the overall tree condition score)</p>
<div data-bbox="94 499 527 1060"> <p>Tree Conditions (cumulative)</p> <p>No defects</p> <p>Minor defects (small <u>codom</u> top, nuisance insect/mistletoe infestation, unfavorable species)</p> <p>Moderate defects (moderate rot, <u>epicormic</u> sprouts, large <u>codom</u> top, multiple trunks, severe insect/mistletoe infestation, early stages of serious disease, exposed roots, some minor or moderate defects that have an additive effect)</p> <p>Major defects (crack in trunk, prevalent rot, history of branch/trunk failure, codominant, prevalent signs of serious disease, several minor and/or moderate defects)</p> <p>Extreme defects (major cracks in trunk, serious exposed roots, major rot, severely <u>diseased</u>, and/or many defects that have an additive effect)</p> <p>Tree has failed, uprooted, or is currently failing/uprooting and requires immediate attention</p> </div>	<div data-bbox="587 499 1023 1060"> </div>	<div data-bbox="1079 499 1518 1060"> </div>
Risk Matrix		
<p>20. Worst site condition present at location (scored in the overall risk score; Lowest score at the top of the list and Highest score at the bottom of the list)</p>	<p>21. Tree Lean (scored in the overall risk score)</p>	<p>22. Tree Height Factor (scored in the overall risk score)</p>
<div data-bbox="94 1337 527 1911"> </div>	<div data-bbox="587 1337 1023 1911"> </div>	<div data-bbox="1079 1337 1518 1911"> </div>

Risk Matrix (cont.)

23. Likelihood of Line Impact (scored in the overall risk score)

The screenshot shows the 'HTMP Risk Assessment' app. The 'Risk Matrix' section is expanded, showing various tree condition factors. The 'Likelihood of Line Impact' is highlighted with a red box and set to 'Probable'.

Work Plan

24. Work Plan Window (Auto Generated: control number, risk rank score, and suggested priority)

The screenshot shows the 'Work Plan' window. It displays auto-generated information: Control Number (D31G20154500506689), Risk Rank Score (49), Suggested Work Prioritization (Priority 2H- work within 1 month), and Selected Work Prioritization.

25. **EXAMPLE:** Changing a couple of the dropdown selections changes the score

The screenshot shows the 'HTMP Risk Assessment' app with modified values. The 'Likelihood of Line Impact' is 'Probable' and the 'Tree Height Factor' is 'Can fall over lowest conductor 1.5-2 times'. The 'Risk Matrix' section is expanded.

Work Plan

26. **EXAMPLE:** Same control number, different risk rank score, and different suggested priority (Auto Generated)

The screenshot shows the 'Work Plan' window. It displays auto-generated information: Control Number (D31G20154500506689), Risk Rank Score (72), Suggested Work Prioritization (Priority 1- work within 24 hours), and Selected Work Prioritization (Priority 1- work within 24 hours).

27. Select a work priority based on the suggested work priority and assessment (specify reason for change – if applicable)

The screenshot shows the 'Work Plan' window with the 'Selected Work Prioritization' dropdown menu open. It lists various priority options, with 'Priority 2H- work within 1 month' selected.

28. Assign an appropriate treatment to mitigate or remove the risk

The screenshot shows the 'Work Plan' window with the 'Suggested Treatment' dropdown menu open. It lists various treatment options, with 'Remove' selected.

Work Plan

29. Select tree Status

The screenshot shows the 'HTMP Risk Assessment' app interface. At the top, it says 'Status: Priority 2-Approved'. Below this, there is a dropdown menu for 'Status' with the following options: Subject Tree, Priority 1-Approved, Priority 2-Approved (selected), Priority 3, Work Authorization Pending, Refusal, Tree Work Complete, Associated LPC, QA/QC - Audit Fail; Re-Work, QA/QC - Audit Pass, Archaeological Concern, and Biological/Environmental/Waters... The app also displays fields for User (Seth Reid), Entry Created (2018-12-14 14:32:01), Last Updated (2018-12-16 21:53:26), Address (2425 S Blackstone St, Tulare, CA 93274, US), Customer Data (High Fire Threat District, HFTD, Inspector Name, Phil C), Line Information (District/Grid, District 31 - Grid 20, Circuit 2, Voltage 2.4-21kV (distribution), Distribution Line Details, Isolated Distribution), and Between Poles.

30. Enter any important comment or additional information

The screenshot shows the 'HTMP Risk Assessment' app interface. The 'Work Plan' section is visible, with a red box highlighting the 'Comments' field. The comment entered is 'Cottonwood in retrenchment; next to pool and doghouse'. The app also displays fields for Overall Tree Condition (Major defects), Tree Defects (multiple trunks, very low codom, unfavorable species, some dead wood, moderate rot, bad branch unions, species prone to failure), Site Conditions (Change in drainage), Visual Crown Health (majorly in decline), Tree Lean (Moderate Lean (8-15 degrees)), Tree Height Factor (Can fall over lowest conductor 1.5-1.9 times), and Likelihood of Line Impact (Near Certain).

31. Use the target feature to change GPS coordinates of the tree

The screenshot shows the 'HTMP Risk Assessment' app interface. The 'Set Location' screen is visible, showing a map with a red pin indicating the location of the tree. The map shows a residential area with houses and trees. The app also displays the coordinates 36.30379236, -119.29045553 and a link to enter location.

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R.18-10-007 – SB 901

DATA REQUEST SET M G R A - S C E - 0 0 1

To: MGRA
Prepared by: Peter Lee
Job Title: Senior Business Analyst
Received Date: 3/3/2019

Response Date: 3/7/2019

Question 16: What fraction of outages from “at risk” or “reliability” tree fall-ins occur during 1) winter storms or rain storms? 2) high-wind events during dry periods, including fire-weather events 3) dry periods with no wind? This can be an approximate estimation using calendar periods to estimate “wet” and “dry” seasons. High wind designations should be based on weather data.

Response to Question 16:

SCE objects to the question as it is overly broad, unduly burdensome, and because it is beyond the scope of this proceeding. SCE’s 2019 Wildfire Mitigation Plan (WMP) is comprised of wildfire mitigation programs and activities SCE plans to undertake in 2019 to reduce wildfire risk. Notwithstanding this objection, SCE responds as follows:

SCE tracks storm outages but currently does not track “at-risk” or “reliability” tree status during winter/rain storms, high-wind events during dry/fire-weather events or dry periods. Intuitively, fall-ins tend to correlate with saturated soil and or high-wind conditions.

The tables below provide the number of Tree Caused Circuit Interruptions (TCCI) during weather events from 2016 to 2018:

2016		2017		2018	
TCCI Category	Interruption Count	TCCI Category	Interruption Count	TCCI Category	Interruption Count
Vegetation Blown	496	Vegetation Blown	477	Vegetation Blown	328
Total	496	Total	477	Total	328

Southern California Edison
R.18-10-007 – SB 901

DATA REQUEST SET M G R A - S C E - 0 0 1

To: MGRA
Prepared by: Peter Lee
Job Title: Senior Business Analyst
Received Date: 3/3/2019

Response Date: 3/7/2019

Question 17: How many instances of outages due to vegetation contact or fall-in occurred over the last five years for circuits using covered conductor or “tree wire”? How many ignitions? What is the rate per deployed mile of vegetation-caused outages and vegetation-caused ignitions for covered conductor? How does this compare to bare conductor?

Response to Question 17:

SCE objects to the question as it is overly broad, unduly burdensome, and because it is beyond the scope of this proceeding. SCE’s 2019 Wildfire Mitigation Plan (WMP) is comprised of mitigation and activities SCE plans to undertake in 2019 to reduce wildfire risk and not historical data from the last five years. Notwithstanding these objections, SCE responds as follows.

Over the last 5 years, SCE infrastructure has had a de minimis level of covered conductor deployed. SCE deployment of covered conductor only started in earnest in 2018. Additionally, SCE does not track outages or ignitions based on type of conductor.

Regarding vegetation-associated ignitions, SCE records fire data in accordance with CPUC Decision 14-02-015, which established the Fire Incident Data Collection Plan for utilities. Pursuant to this decision, SCE Fire Incident Data records currently does not track ignitions based on the type of conductor.

Southern California Edison
R.18-10-007 – SB 901

DATA REQUEST SET M G R A - S C E - 0 0 2

To: MGRA
Prepared by: Jonathan Khalaf
Job Title: Senior Advisor
Received Date: 3/4/2019

Response Date: 3/6/2019

Question 18: What is the internal enforcement mechanism that the utility will use to ensure that all goals set in the Wildfire Mitigation Plans are met?

Response to Question 18:

SCE will track, update, and report on progress towards 2019 goals of individual activities and metrics on the wildfire mitigation metrics/activities included in its 2019 WMP on a monthly basis to SCE senior leadership.

Progress towards 2019 goals of individual activities and higher level metrics will be monitored by the Grid Resiliency and Public Safety Program Management Office and management to enable SCE to address any potential performance challenges. All stakeholders are empowered to suggest improvement opportunities, including: field crews conducting work in HFRA, management reviewing results or trends, or formal internal or external auditors. The owner of each mitigation program or activity will be responsible for developing and implementing corrective actions for improvement opportunities encountered during implementation or for metrics that are off track or trending unfavorably.

As discussed in Section 6.5.2 of SCE's 2019 WMP, ensuring implementation of corrective actions and overall monitoring of the metrics will be the responsibility of the applicable organization. A list of responsible organizations by wildfire mitigation activities can be found in Section 6.1.2. These organizations will report to executive leadership through existing channels.

Additionally, in accordance with P.U.C. Section 8386, SCE will file a report with the CPUC addressing SCE's compliance with its 2019 WMP by March 31, 2020 or another date as determined by the Commission.

Southern California Edison
R.18-10-007 – SB 901

DATA REQUEST SET M G R A - S C E - 0 0 2

To: MGRA
Prepared by: Russell Archer
Job Title: Senior Attorney
Received Date: 3/4/2019

Response Date: 3/6/2019

Question 19: Provide three realistic scenarios in which a utility might start a wildfire and then be held to be imprudent for purposes of cost recovery and in which that imprudence would be tied back to lack of compliance with the Wildfire Mitigation Plan. These scenarios would assume the absence of any other Prudent Manager Standard.

Response to Question 19:

SCE objects to the question to the extent that it calls for information protected by the attorney-client privilege and/or work product doctrines. SCE further objects to the question as it is an incomplete hypothetical, because it calls for speculation and for ultimate legal conclusions, and because it would require the production of a study and not underlying facts. SCE has clearly set forth its position that substantial compliance with its Wildfire Mitigation Plan (WMP) should equate to a finding that SCE has met the prudent manager standard for purposes of the recovery of wildfire-related costs and expenses. That ultimate legal conclusion will be determined by the Commission, the courts, and potentially the State Legislature.