



Preliminary Ignition Investigation Report

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| Ignition Database Index: | 20241412 |
| Electric Incident Investigation (EII) Number: | N/A |
| Incident Name: | Lindburg |
| PG&E Facility Ignition? | Yes |
| CPUC Reportable Ignition? | Yes |
| Date & Time of Incident: | September 30, 2024 at approximately 1126 hours |
| Street Address: | Behind 6760 Rhodes Avenue |
| City: | Placerville |
| County: | El Dorado |
| Latitude/Longitude: | 38.69791, -120.83799 |
| State Responsibility Area (SRA) / Local Responsibility Area (LRA) / Federal Responsibility Area (FRA) | State Responsibility Area |
| PG&E Division: | Sierra |
| High Fire Threat District (HFTD): | Tier 3 |
| High Fire Risk Area (HFRA): | Yes |
| EPSS Buffer: | No |
| Fire Index Area (FIA): | 340 |
| Fire Potential Index (FPI) Rating: FIA | R4 |
| Fire Potential Index (FPI) Rating: Circuit | R5 |
| Was there a PSPS event at the time of ignition? | No |
| Suspected Initiating Event: | Vegetation |
| Failure Driver: | Contact from Object |
| Failure Sub-driver: | Contact – Vegetation |
| Circuit: | Diamond Springs 1103 |
| Circuit Protection Zone: | LR 156136 |
| Nominal Voltage: | 12kV |
| Pole SAP Equipment ID: | 101421841 and 101389865 (midspan ignition) |
| Subject to PRC 4292 Veg Pole Clearance: | No |
| PG&E Equipment associated with ignition: | 4 aluminum conductor steel reinforced (ACSR) |
| EPSS enabled at time of ignition? | Yes |
| Fault Type: | Line to Ground |
| Wire Down (Primary)? | Yes |
| Lead Agency/Agency Having Jurisdiction: | CAL FIRE |
| Fire Size: | 50 x 20-foot per Vegetation Management (VM) |
| FAS Field Remarks ¹ : | Crew called to repair wire down |

¹ FAS Field Remarks entered verbatim.

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| HAWC Summary²: | Resources responded to a vegetation fire at 6766 Lindburg Ave located in a Tier 3 area. The fire was contained to a 50 by 50 spot. The Diamond Springs 1103 EPSS enabled circuit was in the direct vicinity of the fire. There was an outage in OMT on that circuit. It was on OIS #2581358 affecting two customers. There was another outage in OMT OIS #2581366 that was confirmed with the DCC to not be an outage and was produced to get a Tman to respond to the incident. Notifications were made to the Operations Supervisor, PSS, and DCC. The PSS called into the HAWC to report forward progress had been stopped. |
| Injuries / Fatalities / Property Damage / Media Attention: | No/No/No/No |
| Weather Conditions³: | At 1120 hours near the Incident Location: Temperature: 83.0°F Relative Humidity: 28% Wind Speed: 2.9 MPH Wind Gust: 8.3 MPH out of the south-southeast |
| Red Flag Warning (RFW) / High Wind Warning (HWW): | No/No |
| 911 Standby Relief Time: | 24 minutes |
| OIS #: | 2581366 |
| ILIS #: | 24-0117298 |
| FAS #: | T006513397 |
| TOTL #: | N/A |
| Assigned Attorney: | N/A |
| Ignition Investigator & Phone: | <div style="background-color: black; width: 100%; height: 1.2em;"></div> |

² HAWC summary entered verbatim.

³ Weather Observation Site: PG892 (Elevation 1747 feet approximately 0.6 miles southeast of the Incident Location): Mesowest

Executive Summary

On September 30, 2024, at approximately 1032 hours, PG&E received an offline SmartMeter™ alarm before Line Recloser (LR) 156136 operated at 1057 hours. At 1126 hours, PG&E dispatched a troubleshooter to a two-phase primary overhead segment of the Diamond Springs 1103 12kV distribution circuit (see Figure 1) in response to a fire and wire down trouble report. The troubleshooter arrived midspan ('Incident Location') between SAP Pole ID 101421841 ('Pole #1') and SAP Pole ID 101389865 ('Pole #2'), observing CAL FIRE personnel onsite conducting suppression and mop up efforts (see Figure 2) around a burn scar approximately between three meters and 0.25 acres in size. The troubleshooter observed a section of a tree at the Incident Location (see Figure 3 and 4), had fallen through the overhead lines, breaking two of two conductors. Both phases were on the ground, de-energized. The troubleshooter opened Fuse 20157 (one span north of Pole #1) to isolate the Incident Location. The troubleshooter wrote a priority 'A' EC tag (#129606293) to repair the broken conductor, which was completed the same day by a PG&E crew.

It was a warm and dry day on September 30, 2024 near the Incident Location. The high temperature for the day was 91.4°F at 1620 hours and the low temperature was 56.6°F at 0700 hours. The relative humidity was as high as 59% at 0030 hours and as low as 23% at 1610 hours. The strongest wind speed was 12.3 miles per hour (MPH) out of the southwest at 1320 hours. There were no Red Flag or High Wind Warnings in effect nor did this ignition event occur during a Public Safety Shutoff (PSPS) event.

The Vegetation Management (VM) team conducted a post-incident investigation on October 3, 2024. A 75-foot black oak with a diameter at breast height (DBH) of 40 inches experienced a partial failure of its low codominant attachment (see Figure 5, 6 and 7). The incident low attachment that broke is on a slope approximately 50-feet from the conductor and fully exposed to winds in the area. The VM investigator noted the presence of decay deep inside the trunk where the break occurred. However, the decay would not have been externally visible during an inspection. Half of the tree was still standing and green but was removed under RX-03540445 on October 30, 2024. The resulting fire from the broken tree into the line, left a burn area measuring approximately 50 x 20-foot in size east of the incident tree (see Figure 8).

Although the incident tree (Tree Number: VP-03425585) was not within scope for PG&E's Enhanced Vegetation Management (EVM) work nor listed on a Routine Inspection Record, the tree is listed on a Tree Mortality Inspection Record. The incident tree was last inspected and prescribed targeted pruning to trim back line side laterals for clearance on April 30, 2024. The prescribed targeted pruning is listed under RX-01804875 and a work request was approved on September 12, 2024. Due to pending/rollover 2023 tree work, the incident tree was not worked prior to the date of ignition.

Tree Mortality Inspection Record:

- Next planned Tree Mortality Pre-Inspection Patrol: March 15, 2025 to April 15, 2025
- Next planned Tree Mortality Tree Work: March 15, 2025 to June 15, 2025

An Extent of Condition (XoC) was also completed by the VM team on October 3, 2024. The XoC included a patrol six spans west (heavily vegetated area) and five spans east (flat and open area) of the Incident Location. However, the patrol did not identify any Priority 1 (P1) or Priority 2 (P2)⁴ trees or trees with similar conditions as the incident black oak. All trees observed during the patrol were already listed and waiting for work.

System Protection Analysis

The Incident Location on the Diamond Springs 1103 12kV distribution circuit was protected by Fuse 20157 and LR 156136 with Enhanced Powerline Safety Settings (EPSS) enabled. LR 156136 was set in EPSS Mode #3 with Downed Conductor Detection (DCD) and Sensitive Ground Fault (SGF) settings enabled. LR 156136 operated on DCD targets with a recorded high impedance fault that registered fault magnitudes of 4 amps (B-Phase) and 3.5 amps (Ground). LR 156136 tripped and stayed open with no reclosing. Fuse 20157 was opened manually for an added layer of safety while repairs were made. The protective device operated as designed.

Ignition Impact

The ignition was isolated to the incident tree and vegetation on the ground, resulting in a burn scar approximately 50 x 20-foot in size. There were no reports of injuries, fatalities, or property damage. There were two customers impacted by the outage for a total of 464 combined customer minutes.

Sequence of Events

September 30, 2024

- 1032 Hours – First SmartMeter™ offline alarm.
- 1057 Hours – First No Light (FNL) – LR 156136 opens, no PV alarms (*two customers de-energized*).
- 1126 Hours – Troubleshooter dispatched.
- 1140 Hours – Troubleshooter onsite.
- 1152 Hours – Fuse 20157 opened to de-energize and isolate.
- 1325 Hours – LR 156136 closed.
- 1354 Hours – PG&E crew to hold own from Fuse 20157 to End of Line (EOL).
- 1355 Hours – LR 156136 placed on RCL Mode 3.
- 1447 Hours – LR 156136 placed on RCL Mode 1.
- 1448 Hours – Placed CB 1103/2 on Group 5, OK to close Fuse 20157.
- 1449 Hours – Fuse 20157 closed (*two customers re-energized*).
- 1456 Hours – Meter Ping OK.
- 1501 Hours – Placed CB 1103/2 on Group 3.
- 1504 Hours – Placed LR 156136 on RCL Mode 3.

⁴ P1 trees presents an immediate safety and/or reliability risk with high probability for significant impact. P2 trees are non-immediate high to low safety and/or reliability risk.

Corrective Notification Associated with Ignition

The troubleshooter wrote a priority 'A' EC tag (#129606293) associated to Pole #1, to replace one span of 4 ACSR, which was completed the same day by a PG&E crew on September 30, 2024.

Pending Work

| Type | Number | Description | Priority | Date Identified | Due Date |
|------------------|--|---|----------|-----------------|---------------|
| EC Notification | 111615150 | Install high sign and fill in woodpecker holes. | F | April 28, 2016 | June 3, 2023 |
| COE Notification | N/A | | | | |
| LC Notification | N/A | | | | |
| Veg Work Order | RX-01804875/ Work Order 00173406 | Project Type: CEMA – Mid-Cycle Targeted prune – trim back side laterals, get good clearance. | Routine | April 30, 2024 | June 15, 2025 |

Please note this may not include pending major program or project work at the incident location.

Asset Info & Most Recent Inspections and Tests

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|------------------------------|-------------------------|--|
| Source Side Structure | 101421841 – Pole #1 | |
| Info / Inspection | Most Recent Date | Findings |
| Install Date: | January 1, 1989 | 35-foot, Class 6, Douglas Fir |
| Inspection ⁵ : | June 2, 2022 | GO165 Inspection identified no damage or abnormal conditions with regards to equipment and vegetation. |
| | April 20, 2021 | GO165 Inspection identified no damage or abnormal conditions with regards to equipment and vegetation. |
| Patrol: | N/A | |
| Corrective History: | N/A | |
| Aerial Inspection Records: | October 18, 2019 | Aerial view of Pole #1 within Sharper Shape. No aerial view of Pole #1 within iHawk as of yet. |
| VM Inspection: | April 30, 2024 | Incident tree was prescribed targeted pruning under RX-01804875. |
| EVM Inspection: | N/A | No EVM work was found to have been performed within a 1/8th mile radius of the Incident Location. |
| Equipment Test: | N/A | |
| Pole Intrusive Test: | July 12, 2022 | Visual Sound and Pull – No issues, Pass |

⁵ General Order 165 – The CPUC establishes requirements for electric distribution and transmission facilities (excluding those facilities contained in a substation) regarding inspections in order to ensure safe and high-quality electrical service.

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| WSIP Inspection: | March 22, 2019 | WSIP Inspection identified no compelling abnormal conditions for the pole, equipment, and its associated spans along with no vegetation issues/risks. Four bolted PG connectors were noted. |
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| Load Side Structure | 101389865 – Pole #2 | |
| Info / Inspection | Most Recent Date | Findings |
| Install Date: | January 1, 1968 | 45-foot, Class 4, Douglas Fir |
| Inspection: | June 2, 2022 | GO165 Inspection identified woodpecker damage to pole and missing high sign. Referred to existing EC tag (#111615150). See Pending Work section above for further details. |
| | April 20, 2021 | GO165 Inspection identified woodpecker damage to pole and missing high sign. Vegetation overgrowth noted. Referred to existing EC tag (#111615150). See Pending Work section above for further details. |
| Patrol: | N/A | |
| | | |
| Corrective History: | April 28, 2016 | Priority “F” EC tag (#111615150). Original due date of April 28, 2021. Still pending after multiple Field Safety Reassessments. See Pending Work section above for further details. |
| Aerial Inspection Records: | October 7, 2019 | Aerial view of Pole #2 within Sharper Shape. |
| | | No aerial view of Pole #2 within iHawk as of yet. |
| VM Inspection: | April 30, 2024 | Incident tree was prescribed targeted pruning under RX-01804875. |
| EVM Inspection: | N/A | No EVM work was found to have been performed within a 1/8th mile radius of the Incident Location. |
| Equipment Test: | N/A | |
| Pole Intrusive Test: | July 12, 2022 | Visual Sound and Pull – No issues, Pass |
| WSIP Inspection: | March 22, 2019 | WSIP Inspection identified no compelling abnormal conditions for the pole, equipment, and its associated spans along with no vegetation issues/risks. Two auto splices were noted one span south of Pole #2. |

*Incident Location: Between Pole SAP ID 101421841 and 101389865

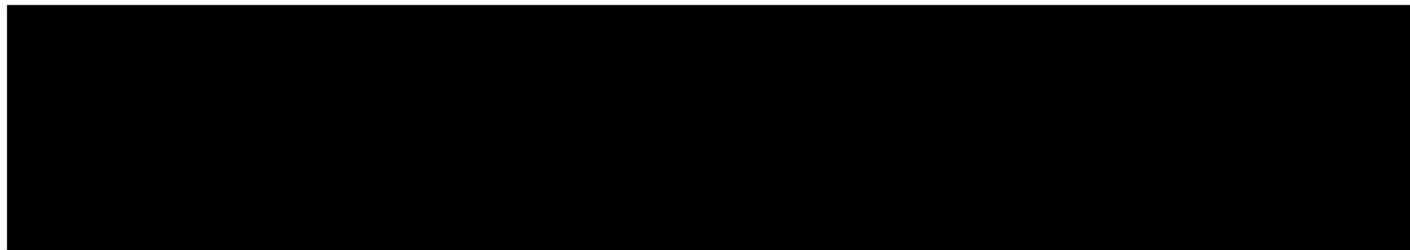
Hazard Barrier Analysis:

| Hazard | Vegetation Contact | Sub-Hazard | Fallen Tree (codominant stem) |
|---|---|--|--|
| Target | Fallen Tree in Tier 3 HFTD Leading to 50 x 20-foot Fire | | |
| Barrier | Expected vs. Observed Performance | Why did the barrier not prevent the ignition event? (See ICF Codes) | Opportunity |
| Barriers that Positively Affected Ignition | | | |
| Enhanced Powerline Safety Settings - Downed Conductor Detection | <p>Expected Performance: Automatically turn off power when a downed conductor is detected.</p> <p>Observed Performance: Barrier performed as expected</p> | N/A | DCD tripped as expected on a high-impedance fault |
| Barriers that were Assessed as Opportunities | | | |
| Covered Conductor on Primary Conductors | <p>Expected Performance: Covered conductor should lower the risk of a wildfire.</p> <p>Observed Performance: Barrier did not exist</p> | A4B2C1D2 –Program limited to certain conductors | Insulated conductors may have reduced ignition impact. |
| Gridscope | <p>Expected Performance: Enable detection of acoustic disturbances on the system, including line break, vegetation contact, conductor contact, or pole tilt.</p> <p>Observed Performance: Barrier did not exist</p> | N/A | Gridscope did not exist for incident span but could have added further detection capabilities. |

Potential Next Steps / Associated CAP Items:

- None at this time.

Single Line Diagram



LEGEND



Substation



Fuse



Line
Recloser



Area of
Interest

Photos and Diagrams of Events

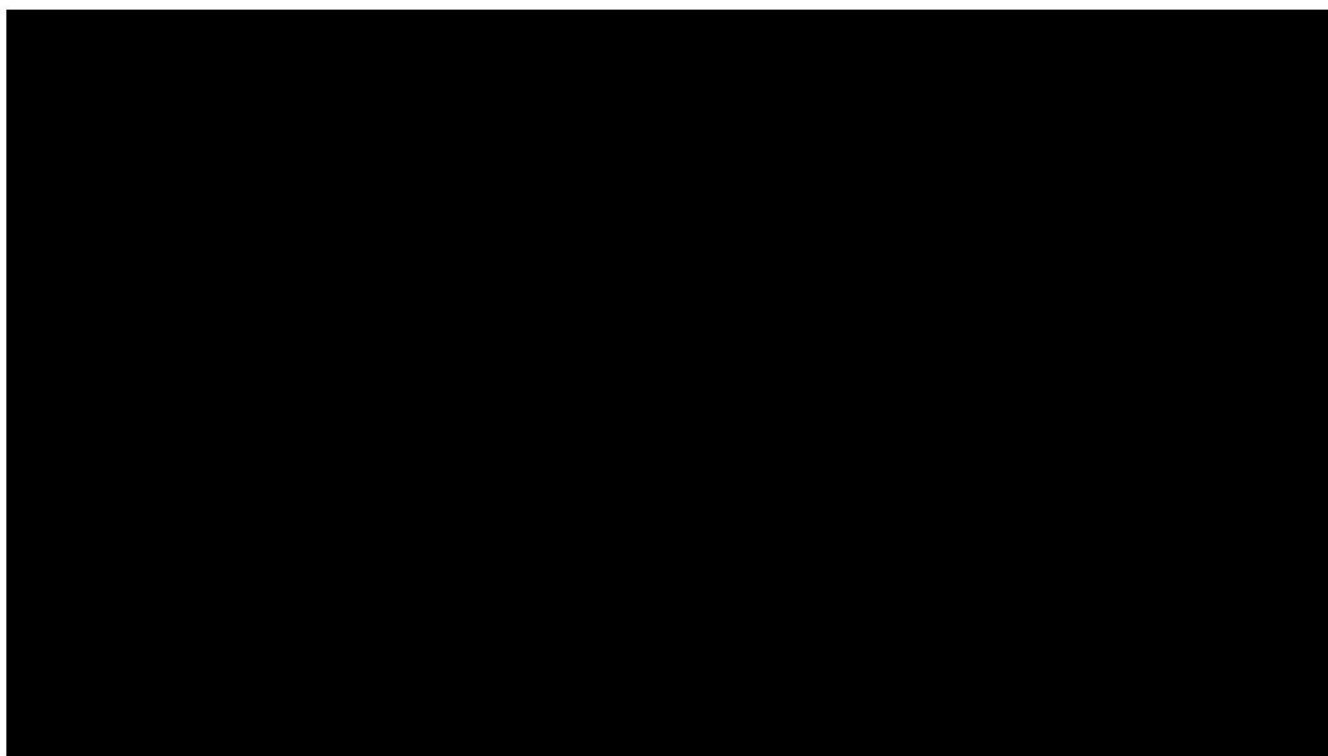


Figure 1 – Google Earth Pro map of Incident Location with approximate location of fire and subject/incident tree shown.



Figure 2 – CAL FIRE personnel engaged in suppression/mop up efforts. Photo taken by troubleshooter on September 30, 2024.



Figure 3 – Point of failure on incident tree (black oak). Photo taken by troubleshooter on September 30, 2024.



Figure 4 – Failed incident tree (upper portion). Photo taken by troubleshooter on September 30, 2024.



Figure 5 – Incident tree. Photo taken by VM investigator on October 1, 2024.



Figure 6 – Incident tree. Photo taken by VM investigator on October 1, 2024.



Figure 7 – Top of failed incident tree. Photo taken by VM investigator on October 1, 2024.



Figure 8 – Burned vegetation/brush at Incident Location. Photo taken by VM investigator on October 1, 2024.

Attachments

Attachments and references can be located in the ESA folder, located below:

[REDACTED]

-----END of REPORT-----