



## Preliminary Ignition Investigation Report

Ignition Database Index:	20240949
Electric Incident Investigation (EII) Number:	N/A
Incident Name:	N/A
PG&E Facility Ignition?	Yes
CPUC Reportable Ignition?	Yes
Date & Time of Incident:	July 14, 2024 @ 0711 hours
Street Address:	Near 34 Millet Lane
City:	Oroville
County:	Butte
Latitude/Longitude:	39.5079880244, -121.4487940051
State Responsibility Area (SRA) / Local Responsibility Area (LRA) / Federal Responsibility Area (FRA)	State Responsibility Area (SRA)
PG&E Division:	North Valley
High Fire Threat District (HFTD):	Tier 2
High Fire Risk Area (HFRA):	Yes
EPSS Buffer:	No
Fire Index Area (FIA):	280
Fire Potential Index (FPI) Rating: FIA	R4
Fire Potential Index (FPI) Rating: Circuit	R4
Was there a PSPS event at the time of ignition?	No
Suspected Initiating Event:	Vegetation
Failure Driver:	Contact from object
Failure Sub-driver:	Vegetation Contact
Circuit:	Wyandotte 1103
Circuit Protection Zone:	Wyandotte 1103LR1508
Nominal Voltage:	12kV
Pole SAP Equipment ID:	100375645
Subject to PRC 4292 Veg Pole Clearance:	No
PG&E Equipment associated with ignition:	Yes
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:	Under three meters in size

<b>FAS Field Remarks:</b>	Pine tree fell into lines and burnt lines crew needed to make repairs
<b>HAWC Summary:</b>	None
<b>Injuries / Fatalities / Property Damage / Media Attention:</b>	No injuries, fatalities, property damage or media attention
<b>Weather Conditions:</b>	It was a hot day on July 14, 2024 near the incident location. The high temperature for the day was 98.2°F at 1700 hours and the low temperature was 73.8°F at 0710 hours. The relative humidity was as high as 50% at 0710 hours and was as low as 18% at 1720 hours. The strongest wind gust was 11.7 mph at 0940 hours from the south.
<b>Red Flag Warning (RFW) / High Wind Warning (HWW):</b>	No Red Flag Warning or High Wind Warning issued
<b>911 Standby Relief Time:</b>	N/A
<b>OIS #:</b>	2516530
<b>ILIS #:</b>	24-0087685
<b>FAS #:</b>	T006448789
<b>TOTL #:</b>	N/A
<b>Assigned Attorney:</b>	N/A
<b>Ignition Investigator &amp; Phone:</b>	

## Executive Summary

On July 14, 2024 at approximately 0711 hours, PG&E dispatched a troubleshooter to the area of Millet Lane near Lost Horizon Drive in Oroville, in response to SmartMeter™ auto-generated tags indicating an area wide power outage. The associated outage occurred on a three-phase primary overhead 12kV distribution segment on the Wyandotte 1103. The incident occurred within a Tier 2 High Fire Threat District (HFTD) and a High Fire Risk Area (HFRA). PG&E's Enhanced Powerline Safety Settings (EPSS) have been enabled since May 2024 due to the increased fire danger in the area.

PG&E Meteorology Data pulled from the MesoWest observation site indicates that was a hot day on July 14, 2024 near the Incident Location. The high temperature for the day was 98.2°F at 1700 hours and the low temperature was 73.8°F at 0710 hours. The relative humidity was as high as 50% at 0710 hours and was as low as 18% at 1720 hours. The strongest wind gust was 11.7 miles per hour (mph) at 0940 hours from the south. At 710 hours near the Incident Location the temperature was 73.8°F with a relative humidity of 50%, a wind speed from the east-southeast of 1.2 mph, and a wind gust of 4.4 mph. The weather data was taken 4.22 miles south of the Incident Location.

The troubleshooter was the PG&E first responder to arrive to the area of Millet Lane and Lost Horizon Drive in Oroville at 0813 hours. The troubleshooter observed two of three fuses opened then called Distribution Operations (DO) to open the third fuse (13749 at 0825 hours. After the de-energization to make the scene safe, the troubleshooter was able to perform a visual inspection on the distribution segment of Wyandotte 1103.

During the patrol, the troubleshooter located a failed tree lying over two phases of the distribution facilities. Pinecones from the tree fell to the ground combusting and igniting a fire on the ground vegetation. The troubleshooter observed burns on two of the three conductors, which shows arcing had occurred when the tree contacted the conductors.

A corrective notification was created as a priority "A" tag, (EC Notification #129218803) to repair the two overhead conductors due to burn marks from the tree making contact. A PG&E repair crew was onsite on July 14, 2024 and completed repairs on the conductor between SAP ID 100375645 and SAP ID 100424725.

The subject tree was identified as a gray pine during a Vegetation Management (VM) post incident investigation. The pine was 14 inches diameter at breast height with a partial failure. There were no indications that the tree was in a deceased or diseased condition. The tree maintained a 40-foot clearance from the conductor and was last inspected on February 29, 2024 by a contract company ACRT.

During the post incident inspection two days after the incident, the VM team observed the tree was cut into pieces with some portions of the tree missing from the site. Inspecting what remained of the tree the team was unable to determine the height of the tree, overall health, defects, root crown disturbance, or a point of failure. There was no marking on the trunk of the tree and no records associated with it through Vegetation Management records.

## System Protection Analysis

Enhanced Powerline Safety Settings (EPSS) were enabled on the Wyandotte 1103 effective May 26, 2024 due to the increased risk of fires in a Tier 2 area. The first protected device to respond to the incident on July 14, 2024 was LR 1508 at 0711 hours, 45 seconds. This LR was set in EPSS alternate 3 modes. When LR 1508 opened,

responding to the irregularity on the B and C phases de-energizing the segment in 29 milliseconds. Phase B experience 136A and phase C 176A. EPSS worked as designed to de energize the circuit when sensing an irregularity in the system.

### Ignition Impact

The ignition event on July 14, 2024 was caused by a single stem gray pine. The pine failed and fell onto the overhead three wire, 12kV distribution system. The contact between the tree and the conductor caused arcing. Pinecones from the tree fell to the ground combusting. Due to the dry fuel bed, a fire ensued under three meters in size. The fire footprint measured seven-foot-four-inches by four-foot 10-inches in size. Once the anomaly was detected in the system, LR 1508 opened causing a power outage affecting 564 customers. There were no injuries, fatalities or media associated with the incident.

### Sequence of Events

#### July 14, 2024

- 0711 hours, line recloser 1508 open, first no light (FNL) reported affecting 564 customers
- 0716 hours, PG&E troubleshooter dispatched
- 0726 hours, line recloser 640562 open
- 0737 hours, Butte County FD calls PG&E Emergency Line requesting help at 40 Millet Lane
- 0750 hours, line recloser 29830 close, 401 customers restored
- 0813 hours, PG&E troubleshooter onsite, fuse 13749 open
- 0834 hours, line recloser 1508 close, 149 customers restored
- 1001 hours, request for PG&E repair crew
- 1132 hours, PG&E repair crew onsite
- 1352 hours, fuse 13749 close, 14 customers restored
- 1745 hours, PG&E repair crew completed repairs and vacated scene

### Corrective Notification Associated with Ignition

An “A” tag, EC Notification 129218803 was created to repair the damaged conductor. This tag was worked by a PG&E Crew on July 14, 2024 where a splice was placed where the vegetation made contact with the conductor.

### Pending Work

Type	Number	Description	Priority	Date Identified	Due Date
EC Notification	126892620	Repair pole, woodpecker damage at chicken wing bracket. Chicken wing brackets are loose	E	08/23/2023	08/23/2024
COE Notification	N/A				
LC Notification	N/A				
Veg Work Order	N/A				

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

## Asset Info & Most Recent Inspections and Tests

Source Side Structure		
Info / Inspection	Most Recent Date	Findings
Install Date:	1982	40' Class C Douglas fir, wood pole
Inspection:	08/14/2023	GO165 Inspection – No action items identified
	06/16/2021	GO165 Inspection – Overgrown vegetation identified
Patrol:	N/A	
Corrective History:	01/09/2022	Vegetation work to remove trees and bushes 15' around pole
Aerial Inspection Records:	10/18/2022	
VM Inspection:	02/29/2024	
EVM Inspection:	N/A	Tree not identified for work, therefore, not in VM database
Equipment Test:	N/A	
Pole Intrusive Test:	04/07/2008	No issues identified
WSIP Inspection:	N/A	

\*Incident Location: SAP ID: 100375645

Load Side Structure		
Info / Inspection	Most Recent Date	Findings
Install Date:	1990	50' Class 4 Douglas fir, wood pole
Inspection:	08/14/2023	GO165 Inspection – No action items identified
	06/21/2021	GO165 Inspection – No action items identified
Patrol:	N/A	
Corrective History:	N/A	
Aerial Inspection Records:	10/18/2022	
VM Inspection:	N/A	
EVM Inspection:	N/A	
Equipment Test:	N/A	
Pole Intrusive Test:	04/07/2008	No issues identified
WSIP Inspection:	04/02/2019	Applied visibility strips to pole

\*Location: SAP ID: 100424725

### Hazard Barrier Analysis:

Hazard	Vegetation Contact	Sub-Hazard	Fallen Tree
Target	Vegetation Contact on Conductor in Tier 2 HFTD causing <3-meter fire		
Barrier	Expected vs. Observed Performance	Why did the barrier not prevent the ignition event? (See <a href="#">ICF Codes</a> )	Opportunity
Barriers that Positively Affected Ignition			
Enhanced Powerline Safety Settings - Downed Conductor Detection	Expected Performance: Automatically turn off power when a hazard is detected to reduce the risk of ignition in High Fire Risk Areas. Operate devices when a downed conductor is detected.		Hazard detected; power shut off within 29ms. Worked as designed to assist reducing the fire size
Barriers that were Assessed as Opportunities			
Covered Conductor on Primary Conductors	Expected Performance: Covered conductor should lower the risk of a wildfire. Requires tree wire to be installed for new construction and reconstruction work in Tier 2 and Tier 3 Fire Areas and Zone 1 (tree mortality) areas.; Observed Performance: Barrier did not exist	A4B2C1D2 – Strategy; Program Strategies: Line Equipment-Related; Program limited to certain conductors	Covered conductors provides opportunity to reduce wildfires in HFTD areas with heavy vegetation
Enhanced Powerline Safety Settings - Instantaneous Trip Settings	Expected Performance: Automatically turn off power when a hazard is detected to reduce the risk of ignition in High Fire Risk Areas. Set protective devices to operate quickly when a fault occurs but not under typical operating conditions for the line.; Observed Performance: Barrier did not exist	A1B2C2D3 – Limitation: Equipment Limitation; EPSS Limitation; Device Tripping Time is Limited	Down Conductor Detection (DCD) was on alarm only setting.

### Potential Next Steps / Associated CAP Items:

- Requested corrections to ILIS record to indicate how many fuses opened prior to PG&E personnel arrival.

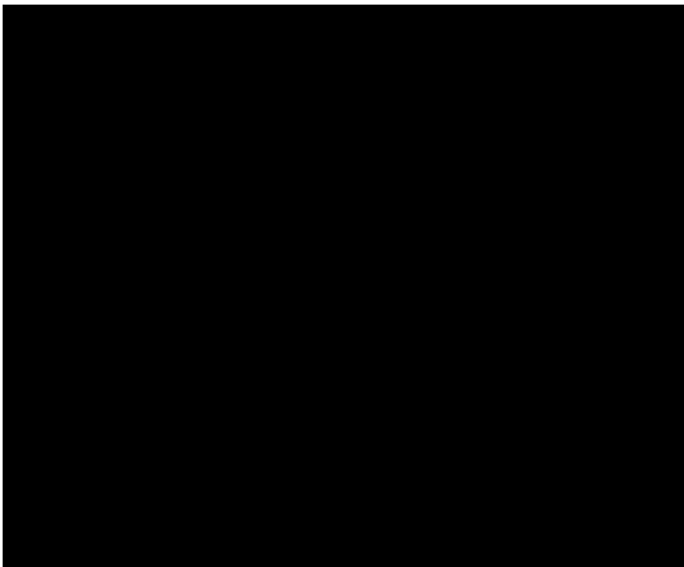
#### Single Line Diagram



##### LEGEND

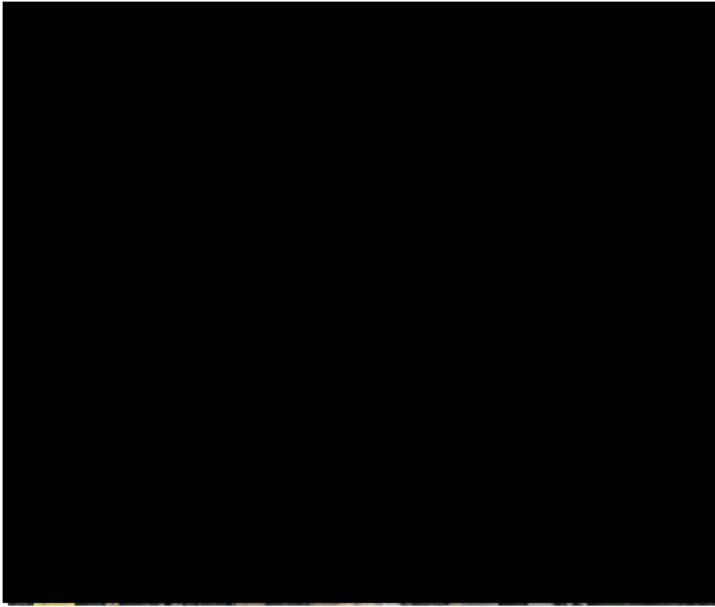


#### Photos and Diagrams of Events



*Photo 1: EDGIS overview of location of where the fire occurred.*





*Photo 2: Google earth overview of location of where the fire occurred.*



*Photo 3: Subject tree taken by troubleshooter.*





*Photo 4: Ignition site, taken by troubleshooter.*



*Photo 5: ignition site, taken by vegetation management crew, post incident.*



*Photo 6: taken by vegetation management crew, post incident of subject tree.*



*Photo 7: taken by vegetation management crew, post incident, showing repair splice*

This report is preliminary and based on available information as of **August 7, 2024**; event data is subject to change based upon subsequently discovered information.

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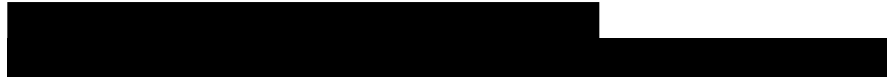
Internal



*Photo 8: taken during inspection in 2001, showing overgrown vegetation*

### Attachments

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



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