



## Preliminary Ignition Investigation Report

<b>Ignition Database Index:</b>	20240441N
<b>Electric Incident Investigation (EII) Number:</b>	N/A
<b>Incident Name:</b>	Jordan
<b>PG&amp;E Facility Ignition?</b>	Yes
<b>CPUC Reportable Ignition?</b>	Yes
<b>Date &amp; Time of Incident:</b>	May 20, 2024 at 1648 hours
<b>Street Address:</b>	NW Highway 101, East of Demonstration Forest Left
<b>City:</b>	Scotia
<b>County:</b>	Humboldt
<b>Latitude/Longitude:</b>	40.4417723235, -124.0202703923
<b>State Responsibility Area (SRA) / Local Responsibility Area (LRA) / Federal Responsibility Area (FRA)</b>	State Responsibility Area (SRA)
<b>PG&amp;E Division:</b>	Humboldt
<b>High Fire Threat District (HFTD):</b>	Tier 2
<b>High Fire Risk Area (HFRA):</b>	Yes
<b>EPSS Buffer:</b>	No
<b>Fire Index Area (FIA):</b>	105
<b>Fire Potential Index (FPI) Rating: FIA</b>	R1
<b>Fire Potential Index (FPI) Rating: Circuit</b>	R1
<b>Was there a PSPS event at the time of ignition?</b>	No
<b>Suspected Initiating Event:</b>	Vegetation
<b>Failure Driver:</b>	Contact from Object
<b>Failure Sub-driver:</b>	High Winds
<b>Circuit:</b>	Rio Dell 1101
<b>Circuit Protection Zone:</b>	LR 1504
<b>Nominal Voltage:</b>	12kV
<b>Pole SAP Equipment ID:</b>	103899941
<b>Subject to PRC 4292 Veg Pole Clearance:</b>	No
<b>PG&amp;E Equipment associated with ignition:</b>	Conductor
<b>EPSS enabled at time of ignition?</b>	No
<b>Fault Type:</b>	Three Phase Fault
<b>Wire Down (Primary)?</b>	Yes
<b>Lead Agency/Agency Having Jurisdiction:</b>	CAL FIRE
<b>Fire Size:</b>	0.1

<b>FAS Field Remarks:</b>	Crew to repair wire down due to tree through lines. Tree broke during high wind event, found lines broken under tree. Fire in vicinity.
<b>HAWC Summary:</b>	First responders are on scene and IC is reporting 2 separate fires that are 50ft x 50ft spots. Fires are contained and PGE is enroute.
<b>Injuries / Fatalities / Property Damage / Media Attention:</b>	0/0/0/0
<b>Weather Conditions:</b>	It was a fair and dry day on May 20, 2024 near the incident location. The high temperature for the day was 59.0°F at 1450 and the low temperature was 41.0°F at 0630. The relative humidity was as high as 100% at 0030 and was as low as 63% at 1450. The strongest wind gust was 33.4 mph at 1430 from the north-northwest
<b>Red Flag Warning (RFW) / High Wind Warning (HWW):</b>	No high wind or red flag warning issued
<b>911 Standby Relief Time:</b>	Nine minutes
<b>OIS #:</b>	2463508
<b>ILIS #:</b>	24-0068053
<b>FAS #:</b>	T006398930, T006399039, T00639850
<b>TOTL #:</b>	N/A
<b>Assigned Attorney:</b>	N/A
<b>Ignition Investigator &amp; Phone:</b>	

## Executive Summary

On May 20, 2024, at 1648 hours the Rio Dell 1101 a 12kV overhead circuit recorded an outage affecting 255 customers. At 1658 hours a troubleshooter was dispatched to the outage area to investigate the cause of the outage. The troubleshooter arrived onsite at 1804 hours, where he began patrolling for any visible signs of damage.

The troubleshooter located an area of concern near U.S. Highway 101, north of Demonstration Forest Left in Scotia, in Humboldt County, California. The location is in a Tier 2 high fire threat district (HFTD) and high fire risk area (HFRA) with a timber fuel model.

During the investigative patrol, the troubleshooter identified a Douglas fir tree with a failed stem approximately 27-feet above ground. The top portion of the tree fell onto the primary aluminum distribution conductors and communication lines. As the tree fell onto the energized overhead lines, four spans of primary conductor failed. This ignited two separate fires in the forest duff. Each incident occurred between one span of poles and resulted in ignitions totaling under one quarter acre in size.

PG&E's Vegetation Management department performed a Vegetation Management Ignition Investigation (VMII) and Extent of Condition (XoC) patrol on May 21, 2024. The incident tree was determined to be a Douglas fir measuring 120-feet in height, 25-inches in diameter at breast height (DBH). The investigator confirmed that the tree was alive at the time of incident.

The Incident Location was inspected by Vegetation Management's Routine Maintenance program, Second Patrol Program, and a Vegetation Management Operational Mitigation patroller. Post ignition review of the Douglas fir tree by Vegetation Management personnel indicated that the tree had visible defects in the form of rot and decay which were facing away from conductors. A 'level 2' inspection involving a 360-degree review of the tree would have been required to identify the defects associated with the trunk failure. However, this location was not in scope for this type of inspection unless the inspector observed an issue that triggered a more detailed inspection. Unless that more-detailed inspection is triggered, Vegetation Management Inspectors observe most trees from the direction of the conductor they are patrolling.

It was a fair and dry day on May 20, 2024, near the Incident Location. The high temperature for the day was 59.0°F at 1450 hours and the low temperature was 41.0°F at 0630 hours. The relative humidity was as high as 100% at 0030 hours and was as low as 63% at 1450 hours. The strongest wind gust was 33.4 miles per hour (mph) at 1430 hours from the north-northwest. The weather was taken from MesoWest weather station, the nearest observation site, 377 feet elevation, 9.8 miles northwest of the Incident Location.

## System Protection Analysis

The Rio Dell 1101 circuit was not enabled with Enhanced Powerline Safety System (EPSS) on May 20, 2024 as the EPSS thresholds were not met. The weather indicated category one conditions systemwide with an upper-level system passing through the east causing wind patterns across the northern interior region. Meteorology predicted a potential chance for late afternoon/evening showers with isolated thunderstorms. With the fire index at 105 and an R1 condition, the EPSS guidelines were not critical, therefore the circuit operated in normal conditions.

## Ignition Impact

As a result of the tree failing onto the energized distribution facilities, this caused two separate ignition points. The combined fire footprint of these two locations was less than one quarter acre in size. An area outage occurred affecting 255 customers.

## Sequence of Events

### May 20, 2024

- 1648 hours – Report of first no light, Line Recloser 1504 opened
- 1658 hours – FAS tag created, troubleshooter dispatched
- 1804 hours – Troubleshooter arrived onsite
- 1856 hours – Switch 3945 opened
- 1938 hours – Recloser 8746 closed, restoring 254 customers
- 2014 hours – Troubleshooter requested repair crew and vacated scene
- 2053 hours – Repair crew dispatched to site

### May 20, 2024

- 0222 hours – Switch 3954 closed, restoring one customer. Power fully restored
- 0545 hours – Repair crew vacated site

## Corrective Notification Associated with Ignition

A post incident corrective notification number, 128819567, was created as a priority A tag. A PG&E repair crew was onsite on May 20, 2024 where four spans of 3/0 aluminum were replaced totaling 40 feet along with one crossarm.

## Pending Work

Type	Number	Description	Priority	Date Identified	Due Date
EC Notification	N/A				
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

Load Side Structure		
Info / Inspection	Most Recent Date	Findings
Install Date:	2018	40' Class 3 wood pole
Inspection:	06/13/2023	Identified corroded anchor and guy. High sign faded and loose. GO165 enhanced inspection
	04/29/2021	No abnormal conditions noted in inspection

This report is preliminary and based on available information as of June 6, 2024; event data is subject to change based upon subsequently discovered information.

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Internal

Patrol:	N/A	
Corrective History:	06/13/2023	Replace corroded anchor and guy. Add high sign and trim overgrown vegetation on guy wire. Identified in GO165 inspection. EC #126364446, not worked
Aerial Inspection Records:	N/A	
VM Inspection:	2/29/2024	No work identified.
EVM Inspection:	5/18/2019	Tree not identified for EVM work
Equipment Test:	N/A	
Pole Intrusive Test:	N/A	
WSIP Inspection:	03/09/2019	

\*Incident Location: SAP ID: 103899941

Source Side Structure		
Info / Inspection	Most Recent Date	Findings
Install Date:	1958	40' Class 4 wood pole
Inspection:	04/29/2021	Pole identified as broken, damaged deformed with evidence of rot or decay
	02/18/2018	GO 165 Inspection, no action items identified
Patrol:	N/A	
Corrective History:	06/14/2018	Downed conductor due to tree, crew repaired downed power line
Aerial Inspection Records:	N/A	
VM Inspection:	N/A	
EVM Inspection:	N/A	
Equipment Test:	N/A	
Pole Intrusive Test:	10/22/2014	Test and Treat, no treat required
WSIP Inspection:	03/09/2019	Pole was identified as needing replacement due to decay. Notification 116692655 created, cancelled

\*Incident Location: SAP ID: 101005522

#### Hazard Barrier Analysis:

Hazard	Vegetation Contact	Sub-Hazard	Fallen Tree
Target	Tree failed and fell onto distribution facilities		
Barrier	Expected vs. Observed Performance	Why did the barrier not prevent the ignition event? (See <a href="#">ICF Codes</a> )	Opportunity

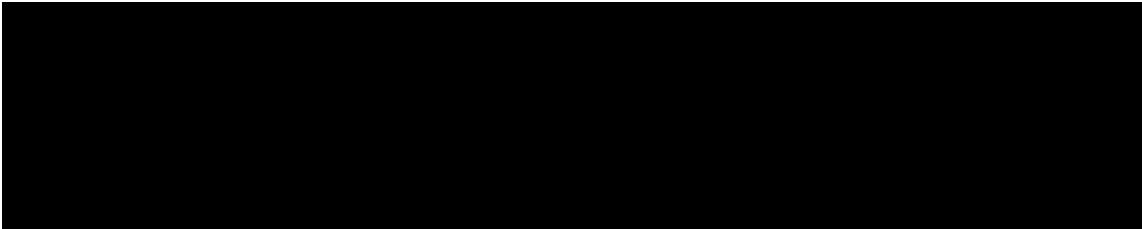
Barriers that Negatively Affected Ignition			
Vegetation Management Operational Mitigation	Expected Performance: Patrol 5 spans on either side of incident tree that caused EPSS outage in HFTD. Identify trees with overhang, outage species, or other conditions that may impact PG&E facilities.; Observed Performance: Barrier did not perform as expected		Adhock inspection did not identify tree that failed and started ignition.
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	This area is in a timber area. Tree wire may be beneficial to reduce the risk of a wildfire in this remote location
Beckwith 51GS Settings - Sensitive Ground Inverse Time Overcurrent	Expected Performance: Automatically turn off power when a hazard is detected to trip on high-impedance faults. Allows for SGF criteria to be met sooner when fault is alternating above/below the detection threshold. Observed Performance: Barrier did not exist		This area could benefit from having a closer protection device installed nearby
Focused Tree Inspection	Expected Performance: A tree risk assessment that includes a 360-degree, ground based visual inspection of the tree crown, trunk, trunk flare, aboveground roots, tree related site conditions, and significant targets. The assessment may include the use of common hand tools; Observed Performance: Barrier did not perform as expected	A4b2C2D1-Strategy: Program Strategies; Vegetation-Related; Location not prioritized for program	a 360 visual inspection/level 2 inspection was not performed, therefore the defect on the tree was not identified

Enhanced Powerline Safety Settings - Downed Conductor Detection	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.	A1B2C2D4 – Limitation: Equipment Limitation; EPSS Limitation, Lack of DCD Functionality	EPSS enablement along with DCD could have reduced the ignition once sensing the anomaly
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Potential Next Steps / Associated CAP Items:

A CAP has not been initiated for this incident.

Single Line Diagram



LEGEND

 Substation  Fuse  Line Recloser  Area of Interest

Photos and Diagrams of Events

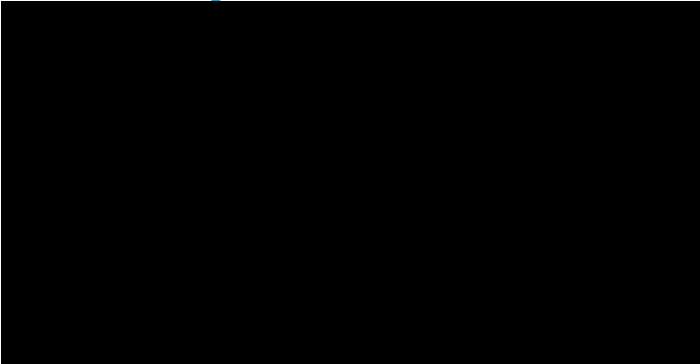
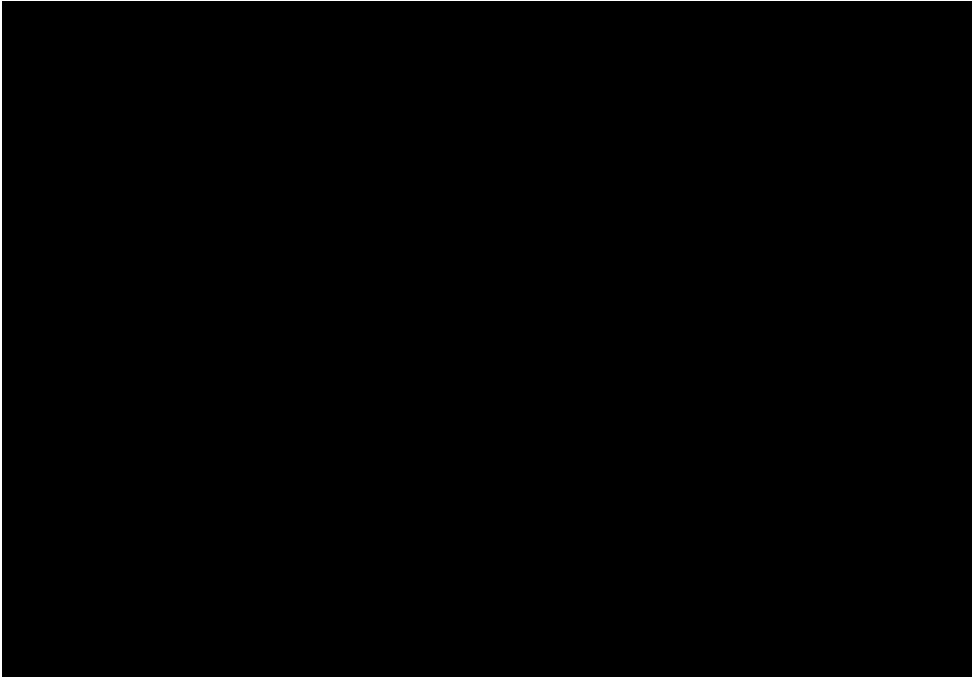


Photo 1: GIS location of where the fire occurred.



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



*Photo 3: Photo taken by inspector on June 13, 2023 inspection.*





*Photo 4: Photo taken by inspector on June 13, 2023, inspection showing damaged anchor.*



*Photo 5: Photo taken by troubleshooter on May 20, 2024 of failed tree.*





*Photo 6: Photo taken by troubleshooter on May 20, 2024 of failed tree taking utility lines down.*



*Photo 7: Photo taken by VM, May 21, 2024, post trunk failure.*



*Photo 8: Photo taken by troubleshooter May 20, 2024 of the fire footprint.*

### Attachments

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

[REDACTED] [N](#)

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