



Preliminary Ignition Investigation Report

Ignition Database Index:	20241272
Electric Incident Investigation (EII) Number:	N/A
Incident Name:	Brook
PG&E Facility Ignition?	Yes
CPUC Reportable Ignition?	Yes
Date & Time of Incident:	September 03, 2024, @ 1653 hours
Street Address:	In the vicinity of [REDACTED]
City:	Shingletown
County:	Shasta
Latitude/Longitude:	[REDACTED]
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):	247
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:	Equipment – Overloaded
Failure Driver:	All types of equipment/facility failure
Failure Sub-driver:	Splice/Clamp/Connector
Circuit:	Deschutes 1101
Circuit Protection Zone:	Deschutes 11011652
Nominal Voltage:	12kV – Circuit 0.240V – Secondary service (Incident Location)
Pole SAP Equipment ID:	SAP Pole ID: 101485155
Subject to PRC 4292 Veg Pole Clearance:	No
PG&E Equipment associated with ignition:	Secondary service hot-leg connector
EPSS enabled at time of ignition?	No
Fault Type:	Force out
Wire Down (Primary)?	No
Lead Agency/Agency Having Jurisdiction:	CAL FIRE
Fire Size:	One acre in size (based on the HAWC summary)

FAS Field Remarks:	FD onsite w/majority of resources on Merilea Lane off CA-44; FD working vegetation fire; transformer blown. Transformer overheat sticker indicated. Burned connector at bus wire/service connection starting a fire.
HAWC Summary:	Resources responded to the Brook Incident located at the 25000 block of California Highway 44, Shingletown regarding a report of a vegetation fire. This is a Tier 2 area and in the vicinity of the following asset(s). Distribution: DESCHUTES 1101 (EPSS Enabled) Incident Command arrived on the scene and advised the vegetation fire consumed (1) acre prior to advising forward progress stopped.
Injuries / Fatalities / Property Damage / Media Attention:	No/No/No/No
Weather Conditions:	It was a seasonably warm and dry day on September 3, 2024, near the Incident Location. 99.2°F @ 1650 hours.
Red Flag Warning (RFW) / High Wind Warning (HWW):	No/No
911 Standby Relief Time:	66 minutes
OIS #:	2558859 TR7551076
ILIS #:	N/A
FAS #:	T006490857
TOTL #:	N/A
Assigned Attorney:	N/A
Ignition Investigator & Phone:	

Executive Summary

On September 3, 2024, at approximately 1655 hours, PG&E dispatched a troubleshooter (Troubleshooter #1) in response to a 911 call from CAL FIRE reporting of a fire in the vicinity of [REDACTED], in Shingletown CA. The ignition occurred on a secondary service segment of the Deschutes 1101 12kV Distribution Circuit (see Figures 1 and 2), in a Tier 2 High Fire Threat District (HFTD), State Responsibility Area (SRA), and High Fire Risk Area (HFRA) during FPI R4 conditions.

The PG&E Troubleshooter #1 arrived on the scene at approximately 1759 hours and observed a fire. Troubleshooter #1 confirmed that the transformer overheat sticker indicated overloading which resulted in the secondary service hot-leg connector failing on the service which caused arcing that burnt vegetation below at the base of SAP Pole ID # 101485155 (see Figures 3, 4, 5, and 6). Troubleshooter #1 removed the two connectors from the transformer jumpers and made the area safe. The ensuing fire was contained at one acre in size based on the Hazard Awareness Warning Center (HAWC) summary and the fire was suppressed quickly by CAL FIRE. CAL FIRE retained the failed connectors as evidence.

Troubleshooter #1 submitted an Electric Corrective (EC) priority “A” Tag (#129470070) to replace the burnt pole SAP Pole ID # 101485155. PG&E Service Planning contacted the customer about upgrading his panel, but he declined and said he would reduce his usage. The customer assured Service Planning that he understands the potential of a fire hazard and stated that he has equipment on his side of the meter to check and monitor usage.

Prior to the ignition event on July 12, 2024, an Electric Distribution Asset Replacement (ER) Notification priority “G” Tag (#129227922) with a due date of December 31, 2025, was created to replace the transformer that was identified through the O6B Overload Program that showed consistent customer usage exceeding the conductor ampacity on the service drop connected to the property that led from SAP Pole ID # 1014851557.

Meteorology data pulled from the MesoWest weather observation site that was approximately 2.3 miles southwest of the Incident Location indicated it was a seasonably warm and dry day at 99.2°F with a relative humidity of 9%. Winds registered 2.5 Miles Per Hour (MPH) with gusts up to 5.8 MPH at the approximate time of the incident. Relative humidity was as high as 42% at 0630 hours and as low as 9% at 1520 hours.

Repair work began later the same day when the PG&E repair crew and troubleshooter #2 arrived on the scene at approximately 2150 hours. The crew requested a force-out at 0237 hours on September 4, 2024, to cut the primary power at SAP Pole ID # 101485155 for the asset to be replaced. All repair work was completed by 0542 hours on September 4, 2024.

Extent of Condition Summary

Troubleshooter #1 indicated a secondary service hot-leg connector burned/flushed from overloading on the service which caused arcing and burned the pole and vegetation below. The Troubleshooter removed the two connectors from the transformer jumpers and made the area safe. The incident service conductor has now been upgraded to a 397.5 aluminum conductor, which was completed under the Electric Corrective (EC) priority “A” Tag (#129470070) which now meets the required ampacity for the 400-amp meter panel (see Figures 7 and 8).

System Protection Analysis

The Deschutes 1101 12kV Distribution line Circuit was enabled with Enhanced Powerline Safety Settings (EPSS) at the time of the incident. However, the ignition occurring on a secondary service line segment which is not protected by EPSS. EPSS protection only extends to primary voltage.

Ignition Impact

This ignition on September 3, 2024, resulted in a vegetation fire that was one acre in size (based on the HAWC summary). The associated outage from this fire affected seven customers for a total of 1246 customer minutes. PG&E is not aware of any injuries, fatalities, media attention, or property damage associated with this ignition.

Sequence of Events

September 3, 2024

- 1653 hours: 911 call from the fire department to PG&E.

- 1655 hours: Troubleshooter #1 dispatched.
- 1759 hours: Troubleshooter #1 arrived on site and made the area safe.
- 1945 hours: Troubleshooter #1 exits the scene.
- 2121 hours: PG&E repair crew dispatched.
- 2150 hours: Troubleshooter #2 dispatched and the PG&E repair crew arrived onsite.
- 2151 hours: Troubleshooter #2 arrived on site and started preparations for the repair crew to begin making the required repairs.

September 4, 2024

- 0237 hours: First event - First No Light (FNL) – Seven customers were affected by the force-out outage so repairs could be completed.
- 0238 hours: Troubleshooter #2 was given the ok to open Fuse 1027 and tag man on the line (MOL) and to hold own to end of line (EOL) until complete.
- 0532 hours: Troubleshooter #2 was given ok to close Fuse 1027, check power, and report.
- 0535 hours: Troubleshooter #2 closed Fuse 1027 and checked power ok.

Corrective Notification Associated with Ignition

An Electric Corrective (EC) priority “A” Tag (#129470070) was submitted to replace the burnt pole SAP Pole ID # 101485155 along with three new cross-arms, two new down guys, and a new transformer. The existing 1/0A Triplex conductor was also replaced with a new 397.5 aluminum conductor which now meets the required ampacity for the 400-amp meter panel. All repair work was completed by the PG&E repair crew by 0542 hours on September 4, 2024.

Pending Work

Type	Number	Description	Priority	Date Identified	Due Date
ER 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

Source Side Structure	SAP Pole ID: 101485155 – Incident Pole	
Info / Inspection	Most Recent Date	Findings

Install Date:	January 1, 1994	Douglas Fir – Class 4 – Height 45’
Inspection:	July 22, 2023	GO165 Inspection – No declaration items reported.
	May 19, 2022	GO165 Inspection – No declaration items reported.
Patrol:	N/A	
	N/A	
Corrective History:	July 12, 2024	An Emergency Repair (ER) Notification priority “G” Tag (#129227922) was created to replace a transformer that was identified through the O6B overload program that showed consistent customer usage exceeding the conductor ampacity on the service drop connected to the property that led from SAP Pole ID # 1014851557.
	September 3, 2024	One Electric Corrective (EC)priority “A” Tag (#129470070) was submitted to replace the burnt pole SAP Pole ID # 101485155.
Aerial Inspection Records:	July 21, 2019	SAP Pole ID # 101485155 (Shaper Shape) – No abnormal conditions visible (see Figure 9).
VM Inspection:	N/A	
EVM Inspection:	N/A	
Equipment Test:	N/A	
Pole Intrusive Test:	October 11, 2022	Passed with 100% strength.
WSIP Inspection:	March 25, 2019	There were no declaration items reported.

*Incident Location: SAP Pole ID # 101485155

Hazard Barrier Analysis:

Hazard	All types of equipment/facility failure	Sub-Hazard	Splice/Clamp/Connector
Target	Transformer overloaded		
Barrier	Expected vs. Observed Performance	Why did the barrier not prevent the ignition event? (See ICF Codes)	Opportunity
Barriers that were assessed as No, did not affect the ignition.			
Overloaded Transformers Replacement Program	<p>Expected Performance: Targets replacement of transformers identified through overload reports, recorded high oil temperature indicators, or multiple thermal protective device operations during peak load periods</p> <p>Observed Performance: Barrier performed as expected</p>	A3B1C1D3 – Maintenance tag priority ineffective in preventing failure	The Transformer was identified through the O6B Overload Program on July 12, 2024, with a scheduled due date in December 2025.

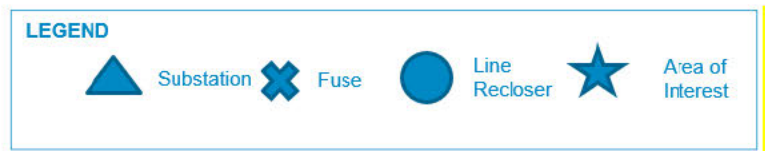
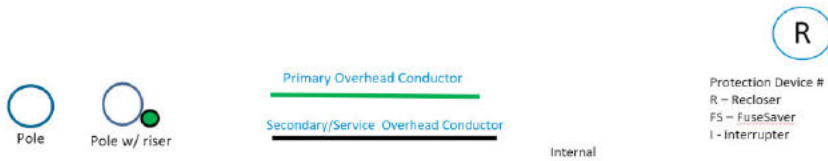
Potential Next Steps / Associated CAP Items:

None.

Single Line Diagram



217101
9723



Photos and Diagrams of Events

This report is preliminary and based on available information as of **September 20, 2024**; event data is subject to change based upon subsequently discovered information.

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Internal

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Figure 1 - Google Earth diagram of the Deschutes 1101 12kV Circuit and secondary service 240V segment – Incident Location. The location of the fire is approximate and based on reports and pictures provided.

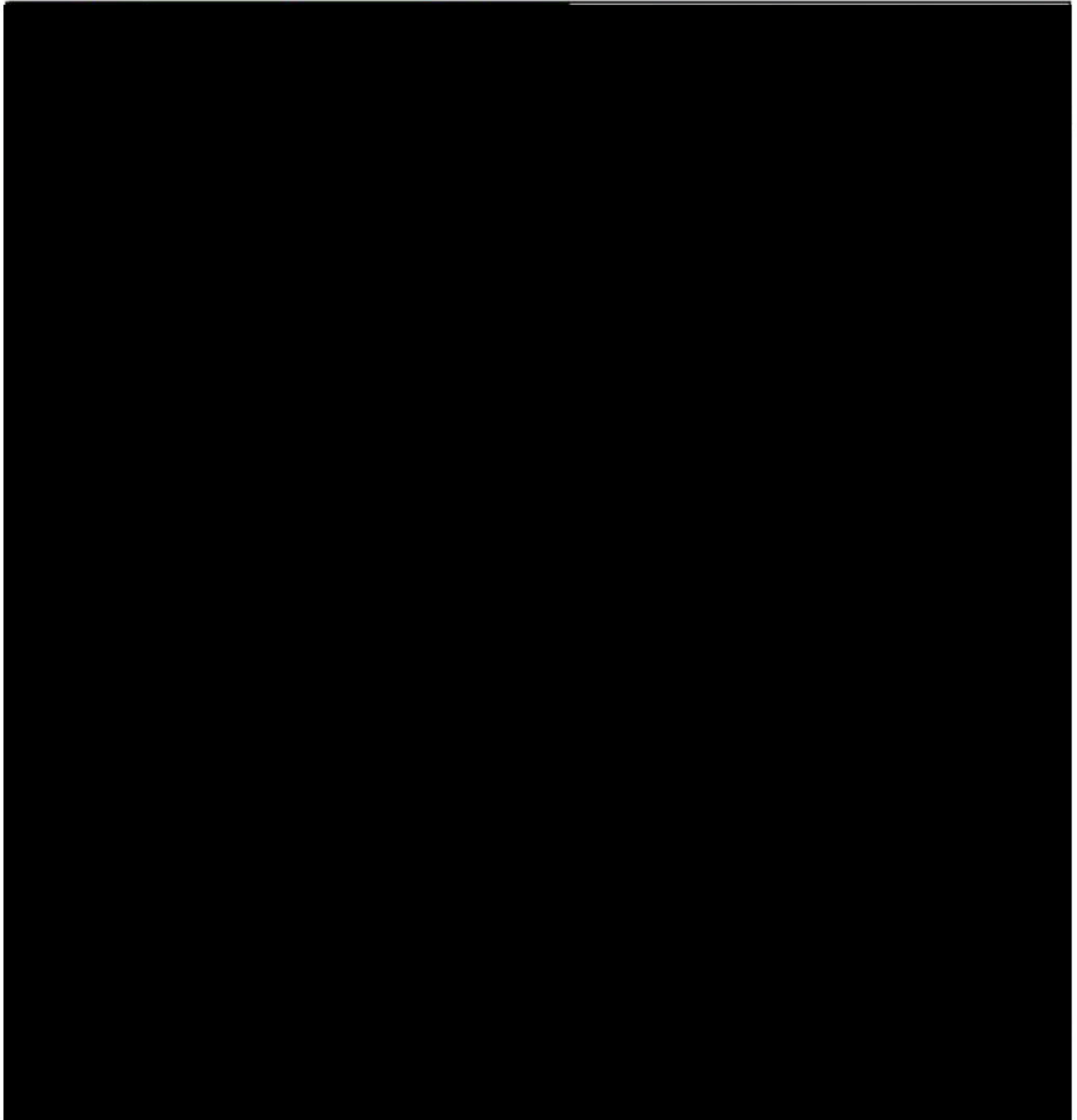


Figure 2 - EDGIS diagram of the Deschutes 1101 Circuit, and a list of the upstream dynamic protective devices between the Substation and Incident Location. The diagram is taken from the completed work package Tag (#129470070).



Figure 3 - SAP Pole ID # 101485155. Picture taken by the troubleshooter on September 3, 2024



Figure 4 – Troubleshooter #1 removed the two connectors from the transformer jumpers and made the area safe. Picture taken by the troubleshooter on September 3, 2024.



Figure 5 The secondary service hot-leg connector failed from overloading on the service which caused arcing and burned vegetation below at the base of SAP Pole ID # 101485155. Picture taken by the troubleshooter on September 3, 2024.



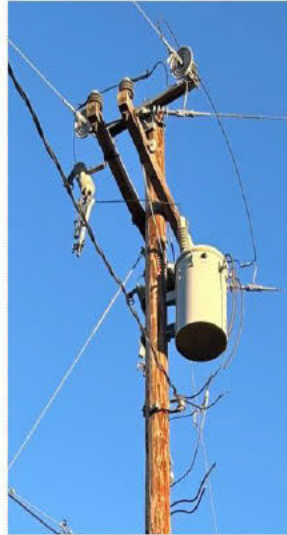
Figure 6 – SAP Pole ID # 101485155 (Incident Pole) and service drop to property located at [REDACTED], Shingletown CA, picture taken by the troubleshooter on September 3, 2024.



Ignition Photos

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Pole burnt and replaced.
PM 35578674



Internal

Figure 7 - Secondary service hot-leg connector burned/flushed from overloading on the service which caused arcing and burned the pole and vegetation below.



New Transf. And Service Drop Info.

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- **Customer Panel**
 - CUSTOMER IS CURRENTLY EXCEEDING MAXIMUM AMPACITY OF A 400A PANEL.
- **Transformer** (CGC# 119736243003)
 - Mat code M260208
 - Size - 167KVA
 - Single phase
 - PEAK DEM: 117.2KVA
- **Service Drop Conductor**
 - Removed 1/0A Triplex Conductor
 - Summer 158 Amps
 - Winter 225 Amps
 - Installed 397 AL conductor ampacity
 - Summer 420 Amps
 - Winter 601 Amps

Calculated Service Conductor Ampacity:

- Normalized voltage below 7% (240V)
 - $V_{normalized} = 220V(L-L), 111V(L-N)$
- Trf KVA = 167kVA
 - Full load current = 759Amps
 - If the two customers taking same amount of load,
Serving 2 customers = $759/2 = 379.5$ per customer

Conductor		Summer Interior		Summer Coastal		Winter	
Type	Size AWG or kcmil	Normal	Emergency	Normal	Emergency	Normal	Emergency
Aluminum	4	106	132	119	140	151	167
	2	142	174	157	188	200	222
	1/0	186	231	208	247	266	295
	4/0	267	355	319	380	408	454
	397.5	420	523	467	560	601	671

REMOVE	77	FT	Remove OH SVC Cond, DPX/TPX/QPX
INSTALL	77	FT	Conductor, 2-397AL, 1-4/0AL, OW Service
INSTALL	1	EA	Svc Con, 2-397AL, 1-4/0AL, to Bussing
INSTALL	2	EA	Pref Grip, DE, 397.5AL, WP
INSTALL	1	EA	Pref Grip, DE, 4/0AL, WP
INSTALL	1	EA	Svc Con, 2-397AL, 1-4/0AL, Meter End

Figure 8 - The incident service conductor has been upgraded to a 397.5 aluminum conductor, which now meets the required ampacity for the 400-amp meter panel.

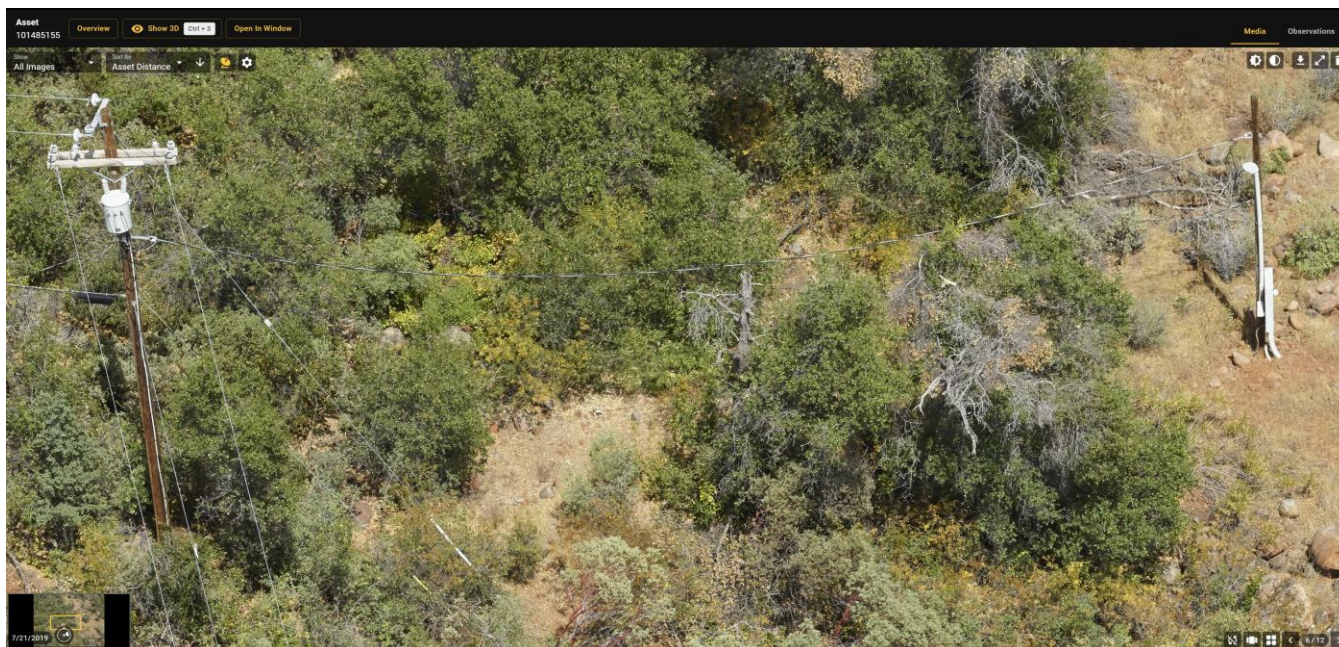


Figure 9 - SAP Pole ID # 101485155 (Incident Pole) and service drop to property located at [REDACTED], Shingletown CA, picture taken from Shaper Shape dated July 21, 2019.

Attachments

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



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