Wildfire Mitigation Plan Update
R.18-10-007 Workshop Phase 2

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September 17, 2019

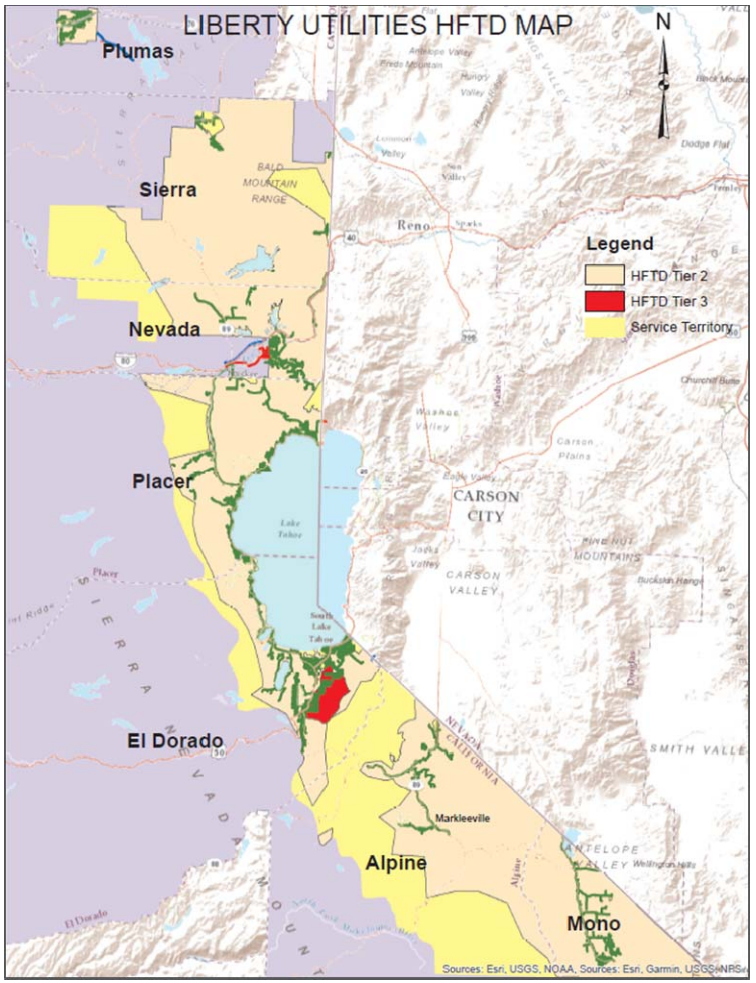
Liberty CalPeco Service Territory

Liberty CalPeco serves approximately 49,000 electric customers in California in and around the Lake Tahoe Basin.

Customers are located in portions of these counties:

- Placer
- El Dorado
- Nevada
- Sierra
- Plumas
- Mono
- Alpine

Almost 80% of customers are located in the Lake Tahoe Basin. The biggest population center is the City of South Lake Tahoe. The Liberty CalPeco service territory extends from Portola in the north to Markleeville and Topaz Lake in the south.



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Strategy and Program Overview

Existing and proposed wildfire preventative strategies can be categorized into five main mechanisms that align with utility best practices. Together, the five components create a comprehensive wildfire preparedness and response plan with a principal focus on stringent construction standards, fire prevention through system design, proactive operations and maintenance programs, and well-socialized operating procedures and staff training.

- **Design and Construction:** These strategies consist of system, equipment, and structure design and technical upgrades.
- **Inspection and Maintenance:** These strategies consist of assessment and diagnostic activities as well as associated corrective actions.
- **Operational Practices:** These strategies consist of proactive, day-to-day actions taken to mitigate wildfire risks.
- **Situational and Conditional Awareness:** These strategies consist of methods to improve system visualization and awareness of environmental conditions.
- **Response and Recovery:** These strategies consist of procedures to react to de-energization, wildfire, or other related emergencies.

Wildfire Prevention Strategy and Program Updates

Design and Construction

Mitigation item	Description	Status
7300 Covered Conductor	Pilot program to replace approximately two miles of conductor in High Fire Threat District (HFTD) Tier 2 area.	Design and permitting complete. Materials ordered. EDC December 2019.
Topaz Covered Conductor	Pilot program to replace approximately two miles of conductor in High Fire Threat District (HFTD) Tier 2 area.	In progress. EDC December 2019.
Fuse Replacement	Replacement of conventional fuses with current limiting fuses. 9 year program to replace 13,466 fuses.	Ordered 300 fuses in May. Expected delivery 9/9/19.
Brockway Substation	Relocate and upgrade substation to modern design and eliminate all aging infrastructure and construction.	In progress. ECD Fall 2020.
Stateline Substation Upgrade	Replace obsolete old wood box construction with modern design using steel. Replace Oil Circuit Breakers (OCB) with modern high-speed vacuum breakers.	Advice letter filed. In approval process.
Apache Avenue Undergrounding	Approximately 3,000 feet overhead to underground conversion in HFTD Tier 2.	In progress. 50% complete.
North Lake Blvd Undergrounding	Approximately 1,760 feet overhead to underground conversion in HFTD Tier 2.	Design complete. In permitting process.
Tree Attachment Removal	Removal of tree attachments to mitigate contact of ignition fuel sources by increasing distance between sources. 2019 WMP Goal: Remove 60 tree attachments.	In progress. Approximately 40% complete for 2019.

Wildfire Prevention Strategy and Program Updates

Inspections and Maintenance

Mitigation item	Description	Status
Vegetation Management Plan	Mitigate wildfire risk conditions by removing fuel source and patrolling lines.	In progress
Annual GO 165 Inspections	Patrol to identify infrastructure or equipment that poses a fire risk.	In progress
GIS Upgrade	Improvement of existing GIS system to improve data collection and tracking.	In progress
LIDAR Inspection	Inspections of overhead circuits to collect data regarding vegetation clearances and hazard tree analysis.	ECD Spring/Summer 2020

Operational Practices

Mitigation item	Description	Status
Infrastructure Protection Teams	Designed to ensure staff is prepared to mobilize in high-risk and emergency situations.	Completed with ongoing review
Emergency Preparedness and Response Protocols	Ensure protocols are up-to-date with the latest mandates and best practices.	In progress. ECD October 2019
Automatic Reclosers	Upgrade existing reclosers with modern reclosers using electronic supervisory controls.	In progress. ECD October 2019
Fire Mode	Mitigate downed wires and reduce energy at potential fault locations	Completed

Wildfire Prevention Strategy and Program Updates

Situational Awareness

Mitigation item	Description	Status
Weather Station Installation	Improves forecasting and de-energization and restoration plans. 2019 Goal: Install 13 weather stations.	In progress. 77% complete. ECD December 2019.
Weather Monitoring and Forecasting	Develop tool for fire weather forecasting potential fire concerns to assist in operational and PSPS decision making.	Complete



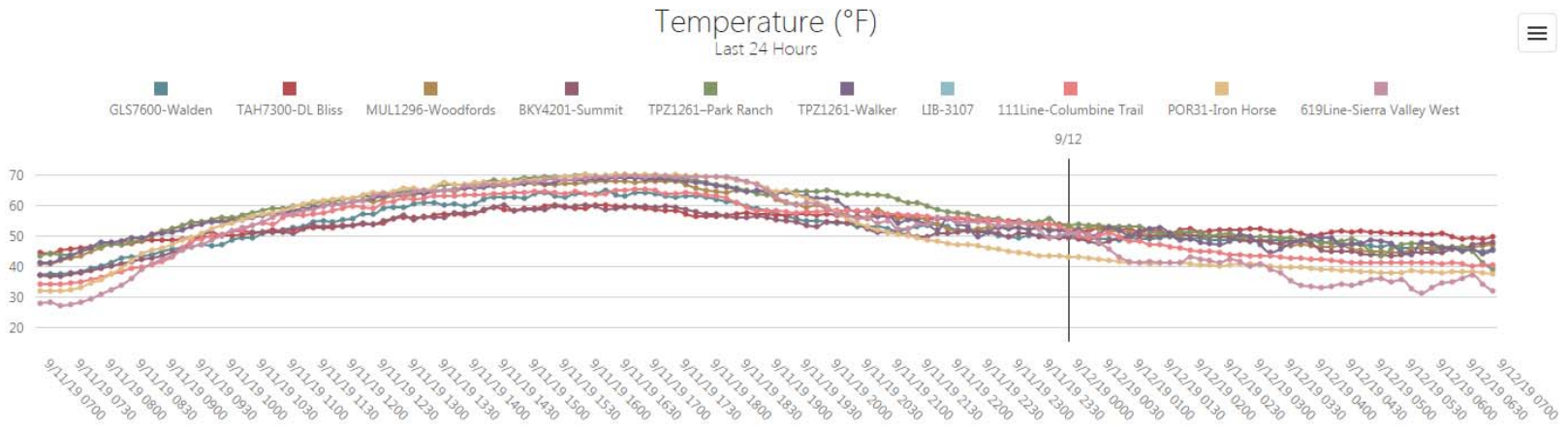




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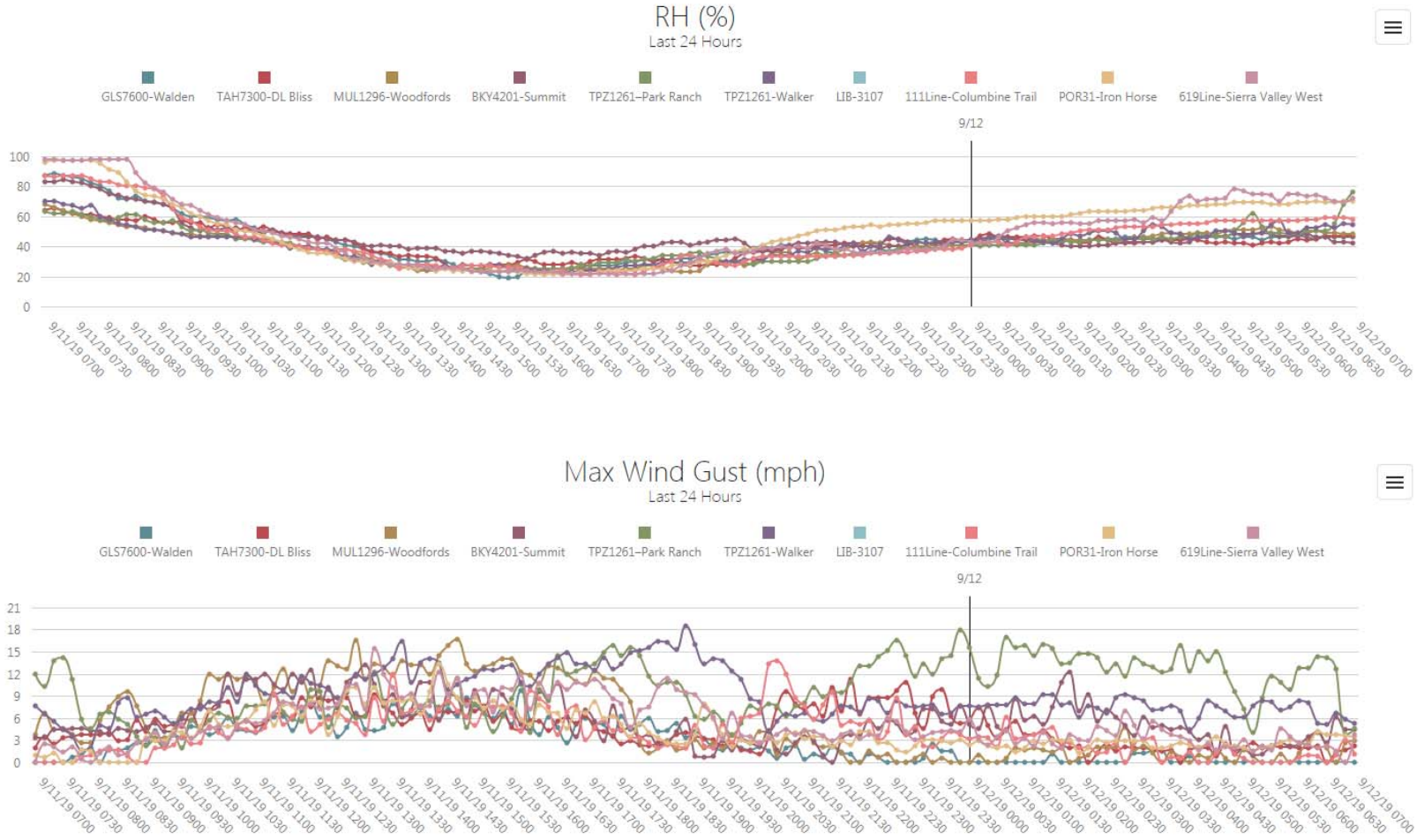
Wildfire Prevention Strategy and Program Updates

Station	Date	Time	Temp (°F)	RH (%)	Dew Pt (°F)	Wind Spd (mph)	Wind Dir (°)	Wind Gust (mph)	Wind Gst Dir (°)	Daily Min Temp (°F)	Daily Max Temp (°F)	Daily Max Wind (mph)	Max Wind Dir (°)
POR31-Iron Horse	9/12/19	0700	37.4 ▲5.6	70 ▼26	28.6 ▼2.2	1.6	SSW | 198	3.5 ▲2.5	SSW | 211	37.4 ▲5.7	41.2 ▲4.9	4.1 ▲0.4	SSW | 204
619Line-Sierra Valley West	9/12/19	0700	31.6 ▲3.9	72 ▼26	23.4 ▼3.7	0.8	NE | 45	3.7 ▲3.7	ENE | 63	30.6 ▲4.7	44.6 ▲5.6	7.0 ▲2.7	SSE | 159
GLS7600-Walden	9/12/19	0700	45.2 ▲8.3	46 ▼42	25.6 ▼7.9	0.0	N | 0	0.0 0.0	NNE | 24	44.4 ▲8.8	49.8 ▲8.5	1.5 ▲1.1	NE | 42
BKY4201-Summit	9/12/19	0700	47.5 ▲10.8	42 ▼41	25.7 ▼6.4	1.6	S | 179	4.5 ▲1.1	S | 188	43.2 ▲8.9	51.1 ▲13.4	12.2 ▲5.6	S | 180
TAH7300-DL Bliss	9/12/19	0700	49.6 ▲5.4	47 ▼17	30.0 ▼2.6	1.1	WNW | 298	2.2 ▲0.2	WNW | 302	48.5 ▲5.9	52.7 ▲7.7	4.3 ▼0.7	WNW | 298
111Line-Columbine Trail	9/12/19	0700	40.2 ▲6.3	58 ▼29	26.8 ▼3.6	0.1	ENE | 62	1.1 ▲1.1	ENE | 61	39.9 ▲6.4	48.9 ▲12.7	4.7 ▲0.5	SW | 217
MUL1296-Woodfords	9/12/19	0700	46.7 ▲6.4	48 ▼20	28.2 ▼2.4	0.3	ENE | 73	2.9 ▼0.9	SSE | 149	43.9 ▲5.6	51.6 ▲5.7	4.7 ▼3.7	NNE | 26
TPZ1261–Park Ranch	9/12/19	0700	38.6 ▼4.7	76 ▲13	31.7 ▲0.1	2.4	S | 171	4.6 ▼7.5	SSE | 167	37.3 ▼5.2	53.8 ▲3.8	16.0 ▲0.7	W | 263
TPZ1261-Walker	9/12/19	0700	45.0 ▲4.2	54 ▼16	29.2 ▼2.5	3.9	W | 259	5.3 ▼2.2	WSW | 255	41.2 ▲3.5	52.7 ▲5.0	9.2 ▲0.6	WSW | 258
LIB-3107	4/30/19	1150 ⚠	-	-	-	0.0	N | 0	0.0	E | 89	-	0.0	0.0	N | 0
Max			49.6	76	31.7	3.9	-	5.3	-	48.5	53.8	16.0	-
Avg			42.4	57	27.7	1.3	-	3.1	-	-	-	-	-
Min			31.6	42	23.4	0.0	-	0.0	-	30.6	41.2	1.5	-



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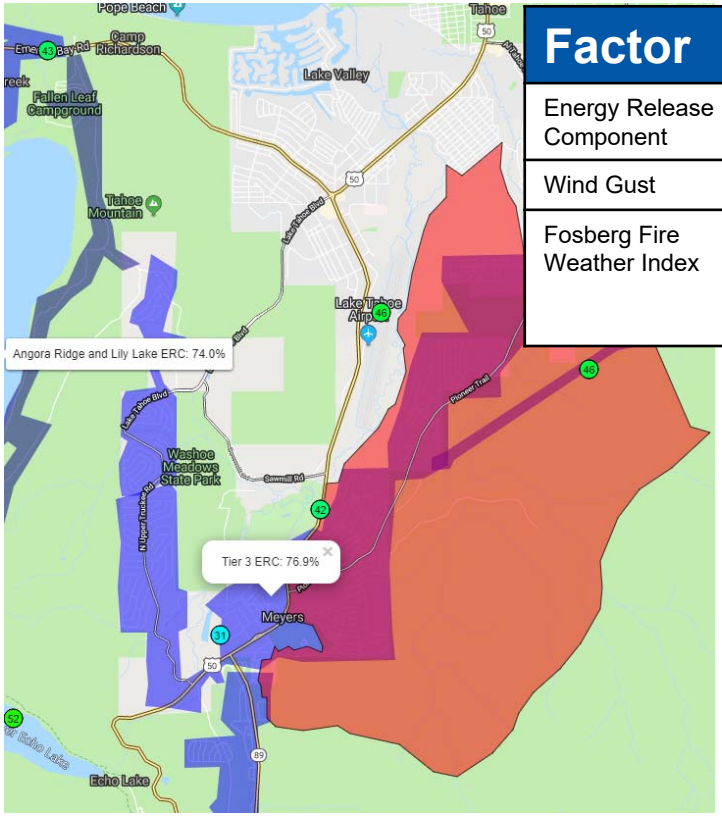


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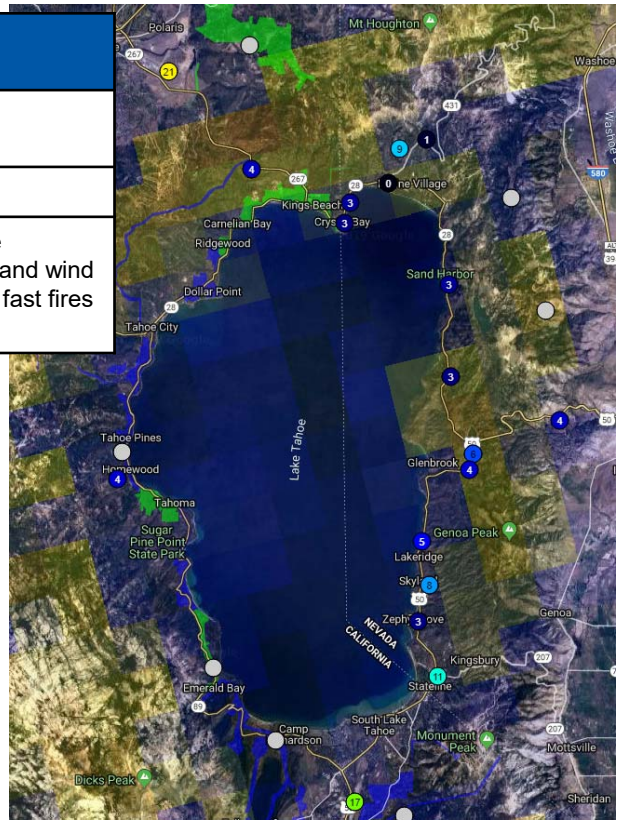
Wildfire Prevention Strategy and Program Updates

Response and Recovery

Mitigation item	Description	Status
Public Safety Power Shut-off (PSPS) Protocols	Protocols and procedures to mitigate wildfire risk conditions by shutting off the power and removing potential ignition source.	In progress. ECD October 2019.



Factor	Threshold
Energy Release Component	92nd Percentile
Wind Gust	40 miles per hour
Fosberg Fire Weather Index	>50 (combines relative humidity, temperature and wind into a measure of how fast fires spread)



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Program Successes

- Weather forecasting/monitoring tool is working well.
- Meetings with public safety partners and the general public have strengthened relationships, improved coordination, and created valuable learning opportunities. Liberty CalPeco has held 22 meetings since May regarding Wildfire Prevention and PSPS.
- Review and enhancement of operational protocols and procedures are strengthening Liberty CalPeco's daily operations.

Implementation Concerns

- Lead time on equipment is too long.
  - Fuses – 3+ months and still waiting for delivery
  - Covered conductor – 6-8 weeks

- Contract crews for construction and tree work are difficult to obtain and expensive.

- Permitting projects, especially on federal land, is a lengthy process with no mechanism to expedite the work.