

APPENDIX D



California Wildfire Advisory Board

Thursday, November 16, 2023

10:00 a.m. - 11:30 a.m.

Presenters:

Kevin Schiedler, Director, Wildfire Mitigation Program

Nora Yotsov, Director, Emergency Management

Steve Vanderburg, Meteorology Manager

Tyler Averyt, Emergency Manager



Agenda

Introductions and Objectives

Service Territory refresher

PSPS History and Risk

- Overview and what's new in Situational Awareness

2023 Fire Season recap

- Head Fire (Happy Camp Complex) in Siskiyou County
- Smith River Complex in Del Norte County

Preparedness

- Recap of 2023 efforts
- Upcoming 2024 efforts
- Medical Baseline and Access and Functional Needs identification and resources

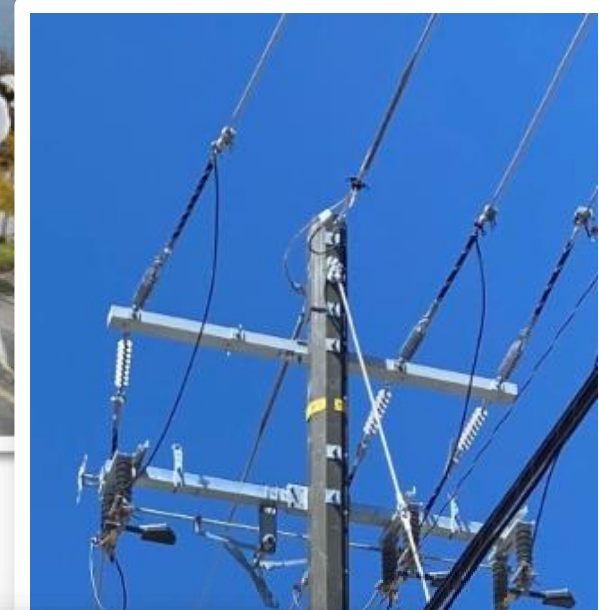
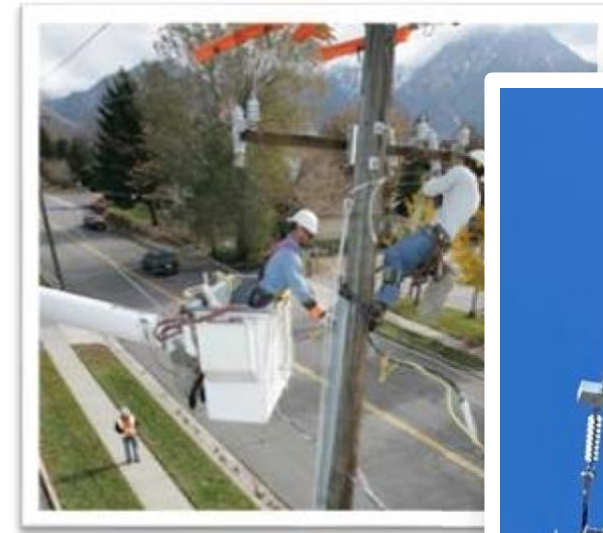
Grid Hardening Update

Elevated Fire Risk Settings (EFR)

Q & A

- Open discussion
- Suggestions for meeting topics

Next Steps



Introductions

Wildfire Advisory Board members

- Name and Affiliation

Pacific Power

- Nora Yotsov, Director of Emergency Management
- Steve Vanderburg, Meteorology Manager
- Tyler Averyt, Emergency Management Program Manager
- Kevin Schiedler, Director of Wildfire Mitigation Program
- Jill Drinkwater, Regional Business Manager
- Lisa Corbly, Senior Emergency Management Planner
- Keven Hoopiiana, Wildfire Mitigation Program Delivery Program Manager
- Tracey Moreland, Tribal Liaison Representative

Objectives

- Provide a formal environment to share lessons learned between communities and PacifiCorp
- Gather feedback from this working group on de-energization

The wildfire advisory board will advise on all wildfire matters including all aspects of Pacific Power's mitigation plans, communications and public safety power shutoff.

Wildfire Advisory Board Schedule and Topics

April	Q2 Meeting	Wildfire Season preparation
November	Q4 Meeting	End of Year Wrap Up

- Follow up on action items from previous meetings

PUBLIC SAFETY POWER SHUTOFF

As part of our wildfire safety plan, we've been making upgrades to strengthen our system, including in new technology, clearing plants and trees away from power lines and installing new weather stations. We've also added a new step in our plan: a Public Safety Power Shutoff.

A Public Safety Power Shutoff is designed to help keep people and communities in high-fire-risk areas safe by proactively turning off power during extreme and dangerous weather conditions that could result in catastrophic wildfires. This measure is only taken as a last resort to help ensure public safety.

A number of combined factors could lead to a Public Safety Power Shutoff including:

- PUBLIC SAFETY RISK**
- DRY VEGETATION** and other potential wildfire fuel
- HIGH SUSTAINED WINDS**
- EXTREME DROUGHT CONDITIONS**
- REAL TIME OBSERVATION** by on-the-ground field experts
- FIRE THREAT** to electric infrastructure

Staying Safe During Wildfire Season

Staying safe, together

To update your contact information, learn more about what we're doing to reduce wildfire risk and get tips on being prepared, visit pacifi.com/wildfiresafety.

Si necesita hablar con un representante que habla español, llame al 1-888-225-2611.

With wildfires becoming more frequent and intense throughout our region, our focus is on keeping you and your community safe. Reducing wildfire threats while providing you with safe, reliable power is our highest priority.

What are some tools to help you plan?

- Visit pacifi.com/wildfiresafety to find out if you are in a potential Public Safety Power Shutoff area and to learn more about how we're working to keep communities safe.
- Check the Public Safety Power Shutoff monitoring table on the webpage above. This is updated each day to let you know if a Public Safety Power Shutoff might happen.
- If you or someone in your home has medical needs that are electricity-dependent, please let us know so you can receive additional notification prior to a Public Safety Power Shutoff. You should also have an emergency plan with your care provider that includes backup power.
- To make sure the phone number and email are correct on your account, please call 1-888-221-7070. If you have an online account or would like to set one up, please visit pacifi.com/wildfiresafety.

Si necesita hablar con un representante que habla español, llame al 1-888-225-2611.

PacifiCorp's Service Territory (refresher)

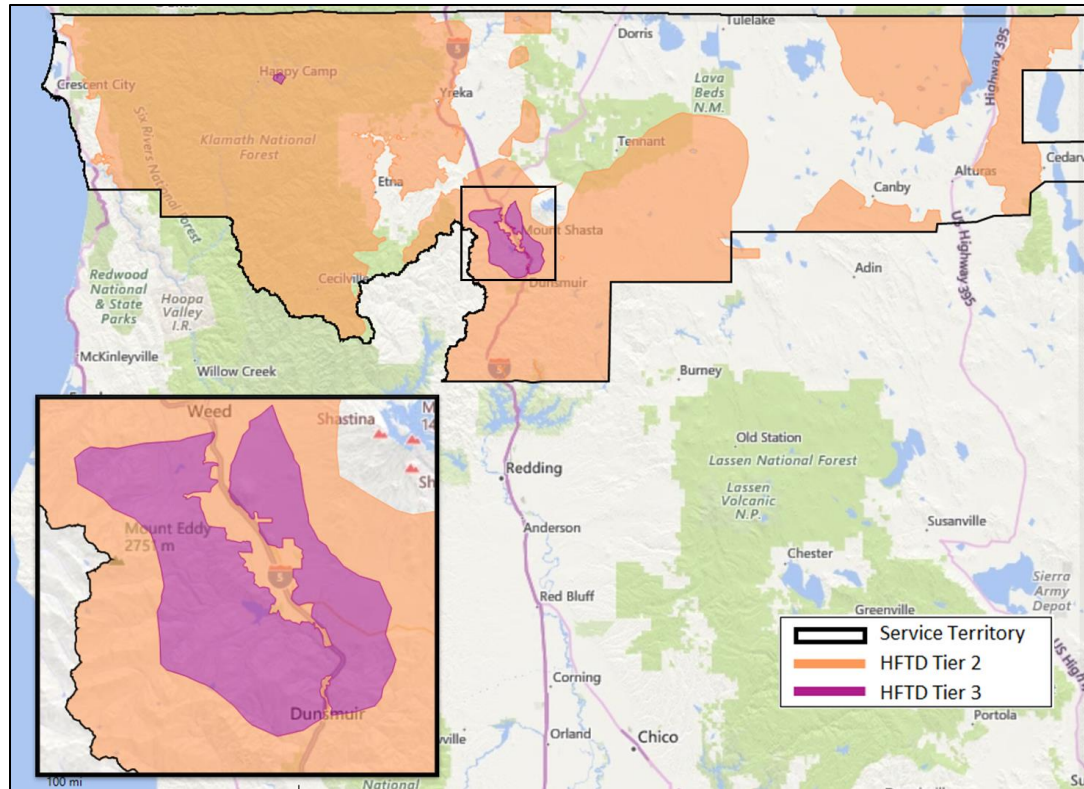
General Stats

PacifiCorp provides electricity to approximately **45,000 California customers** via **62 substations**, **2,500 miles** of distribution lines, and about **780 miles** of transmission lines across nearly **11,000 square miles**

System Wide Initiatives

- ✓ Weather Stations
- ✓ Situational Awareness
- ✓ Operational Protocols
- ✓ Community Education and Outreach

California Service Territory



HFTD

Heightened Risk of Wildfire

Approximately **1,200 miles** or 36% of all **overhead lines** are located within the HFTD
850 miles of overhead distribution in the HFTD;
350 miles of overhead transmission in the HFTD

2022

Accomplishments

Replaced **62 miles** of bare conductor with **insulated covered conductor**
Upgraded **57 reclosers, relays, and circuit breakers** for enhanced protection and control
Installed **2,095 expulsion fuses**

Program Changes

- ✓ **Increased** Frequency of Asset Inspections
- ✓ **Enhanced** Vegetation Management
- ✓ Covered Conductor Installation
- ✓ **Advanced** Protection and Control
- ✓ **Expulsion Fuse Replacements**





Public Safety Power Shutoff (PSPS) History and Risk

PSPS History & Risk

- PSPS is the intersection of wildfire risk and weather-related outage risk



PSPS History

Year	# of Events	Event Duration	Total Customers Affected	AFN/ Medical Baseline Customers Affected	Critical Facilities Affected	CRCs Activated
2020	1	7.9 hours	2,559	5	13	0
2021	1	9.6 hours	1,953	11	19	1
2022	0	0	0	0	0	0
2023	0	0	0	0	0	0

GACC Risk

Year	Moderate Risk Days	Earliest Moderate Risk Date	Latest Moderate Risk Date	High Risk Days
2021	122	May 6	Oct 17	37
2022	96	Jun 11	Oct 31	22
2023	121	Apr 26	Oct 29	14

Continue using PSPS as a tool and a temporary measure:

Decision incorporates multiple factors:

- Real Time Monitoring of Local Conditions
- Weather Forecasting & Risk
- Dynamic Input from Public Safety Partners

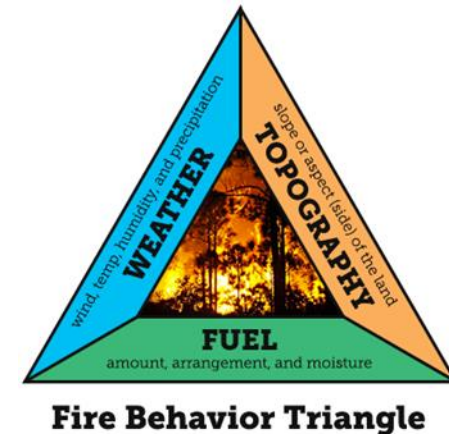
Mitigating Impacts of PSPS with:

- Enhanced planning & preparations
- Advanced warning and notifications
- CRC Activation to provide community services
- Customer Generation Programs

2023 Accomplishments / Updated Methodology:

Forecast Enhancements and Wildfire Research:

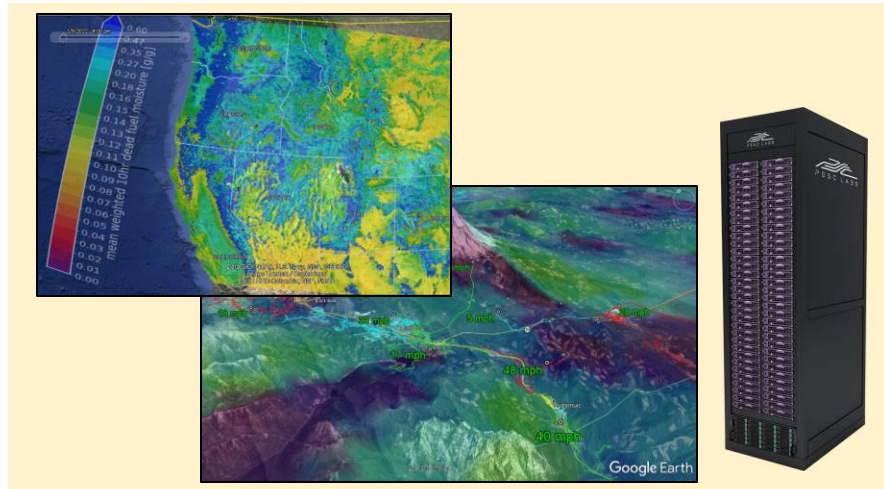
- WFA-E Consequence Modeling
- Red Flag Warnings (RFW) Criteria
- WRF Forecasts
- Fuels Conditions (Grasses, Live Fuels, & Dead Fuels)
- Grassland / Rangeland Wildfires Analysis
- Modified Hot-Dry-Windy Index (mHDWI)
- Fire High Consequence Area Mapping (FHCA)
- Artificial Intelligence / Machine Learning
- Self-Organizing Maps (SOM)



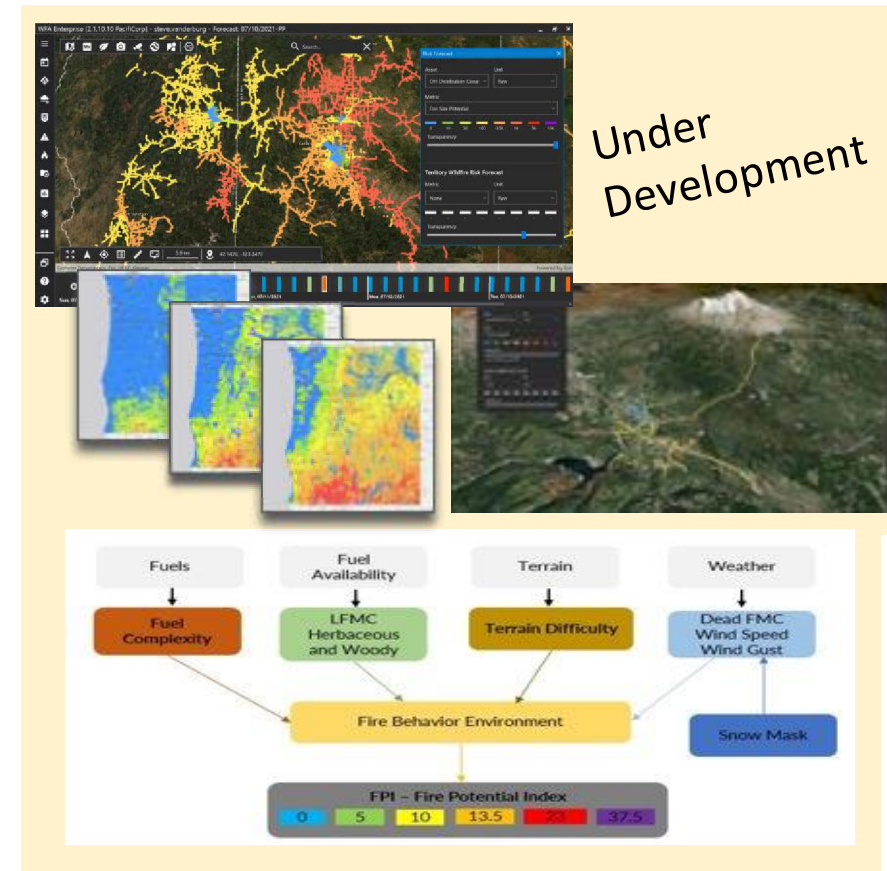
Situational Awareness

Advanced Wildfire Models

- Millions of territory-wide wildfire simulations performed daily
- Wildfire risk and consequence forecasts
- Used for real-time decision making and long-term planning of system hardening



2023 Plan – Fire Potential Index



2023 Fire Season Recap

Happy Camp Complex (Head Fire)

August 15th, 2023

- 353 Customers impacted
- 13 Damaged transmission poles
- 18 Damaged distribution poles
- 1 CRC established at the request of Siskiyou County EOC, supported 385 visitors

Smith River Complex

August 18th, 2023

- 27,000 Customers impacted
- 5 Damaged transmission poles
- 14 Damaged distribution poles
- 2 CRC supported 4,000 visitors



Preparedness

Preparedness Education & Outreach

2023 Completed Activities

- ✓ Tabletop and functional PSPS exercise in Siskiyou County
- ✓ Increased customer communications
- ✓ Enhanced external coordination/communication
- ✓ Wildfire Detection Network Pilot

2024 Planned Activities

- ✓ New Public Safety Partner Portal
- ✓ Installation of 6 more Wildfire Detection Cameras
- ✓ Continued partner & community support



Ways to stay safe and informed

- KEEP CONTACT INFORMATION UP TO DATE** Visit [PacificPower.net](#) to make sure your contact information is current and accurate, so we can keep you updated in the event of a power outage.
- INFORM US OF MEDICAL NEEDS** If you or someone in your home has medication-dependent medical needs, call us at 1.888.221.5975 to let us know.
- SIGN UP FOR TEXT ALERTS** In your account settings, you can choose to receive alerts by text, email or phone in the event of an outage.
- USE OUR MOBILE APP** Track outages, report contact info and do more with our True Pacific Power app.
- READY OR CALL US** Turn **ON** or **OFF** to support your outage or smart thermostat. You can also report outages or other issues by calling 1.877.558.8888.

How to prepare for power outages

KEEP YOUR DISTANCE
You can't tell if a power line is energized just by looking at it. **NEVER** touch or go near downed power lines.

How can we help?
For assistance with your billing, contact our PacificPower.net/Power or call us at 1.888.221.5975.
It's nearly faster than an impressionist, our utility support team at 1.888.221.5871.

Create an emergency supply kit
Now more than ever, it's important to have a plan for what to do in an emergency. Your essential emergency kit items should be stored in airtight, flame- and fire-resistant containers such as plastic buckets or metal cans. Be sure to rotate your kit as needed.

RECOMMENDED ITEMS FOR A BASIC EMERGENCY SUPPLY KIT

- Two to three-week supply of shelf-stable food for all people and pets in your home
- One gallon of water and personal care kit
- Flashlights and extra batteries
- Battery-powered radio and extra batteries
- Solar phone chargers
- Medical waste disposal bag
- One change of clothes and shoes per person
- Wrench or pliers to turn off valves
- Manual can opener
- Shovel
- First-aid kit
- Emergency medications and any medically needed equipment
- Cash
- Family contact sheet (see next section)
- Copies of important documents

Make an evacuation plan & contact sheet

It's important to plan what to do in an emergency. Make a plan for you and your family.

- Identify at least two evacuation routes from both your home and work.
- Designate an emergency meeting location for your family.
- Keep a list of family contact information in your emergency supply kit, and make sure everyone in your family has a copy.

Additional steps to take

SAPPHIRE APPLIANCE
Sapphire Appliances like TVs and computers with surge protectors, including those within the power grid, can be damaged by power surges. Use surge protectors to protect your equipment.

INVEST IN A BACKUP POWER SOURCE
A portable, mobile generator or a portable power station can help provide electricity to the appliances, devices and systems that you need most in an emergency. It's important to have a plan to safely operate these devices. Please see our website for more information on our backup power options. High-capacity generators are not available in our service area.

Medical Baseline & AFN Customer Identification

CARE Program – Updated in 2021

- ✓ All applications and re-certification forms were updated with the following:

- ☐ Check this box if someone in your household has a disability, or requires accessibility, financial or language support during a public safety power outage. Pacific Power will provide an additional notification prior to a public safety power shut off. For more information, visit pacificpower.net/wildfire.

- ✓ Forms are mailed to residential and master-meter customers to enroll in the discounted rate schedule or to re-certify and remain on the rate.

Medical Customers

- Customers can self-certify as a medical customer with no documentation.
- All medical customers are coded as AFN customers.
- All customers receiving an application for medical certification will receive information and will be able to identify as an AFN customer.



2023 Improvements

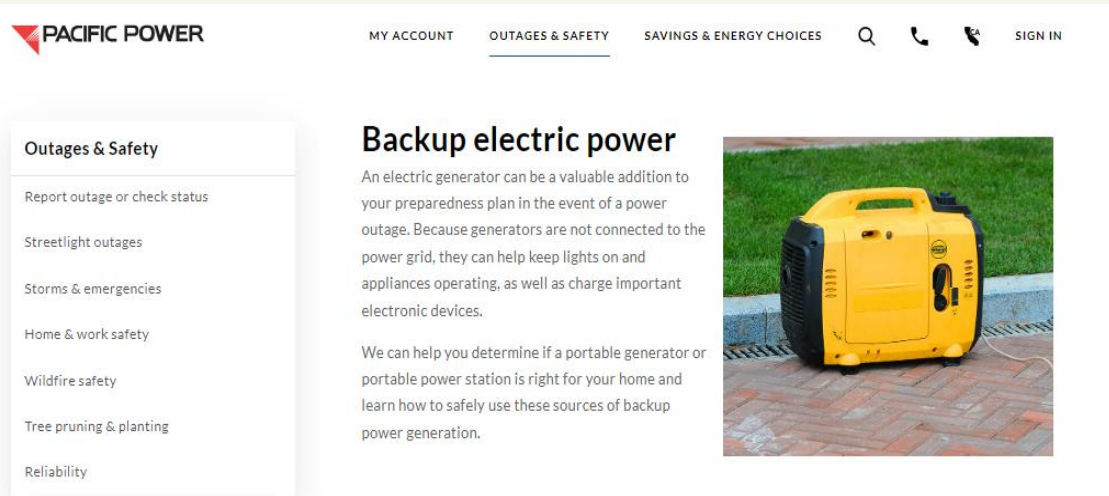
- PacifiCorp continues to seek improvements to identifying the electricity dependent customers with AFN through defining, mapping, and enabling self-identification, and has mapped their respective databases to code customer accounts accordingly
- As a part of the planning process, the team also worked to identify the targeted individuals and benchmark with state agencies to create an informed estimate of the number and types of individuals with disabilities and others with AFN residing in the community
- As of November 2023, **1,204** customers in PacifiCorp's databases have a medical baseline code on their account. This represents an increase of **just over 2%** from the last report.
- All medical baseline customers are identified as AFN customers

2022 - 2023 AFN Customer Counts

2022 AFN	2023 AFN	Total Increase
1173	1204	31

Backup Generation and Portable Battery Programs

NEW Website and Reference Material



Generator Rebate Program

- Up to a \$300 rebate offered on the purchase of a backup power supply to all Pacific Power customers in California, **Additional rebate** of \$500 to Access and Functional Needs (AFN) customers (total rebate of up \$800)

211 rebates
gifted to date



Free Portable Battery Program

- Implemented in 2021 to provide back-up batteries – at no cost – to medical baseline customers. To date, 84 eligible customers have received batteries.

Program Includes:

- ✓ Technical assessment of needs
- ✓ Free-to-the customer portable batteries
- ✓ Training
- ✓ Customer Support

Customer Feedback:

- ✓ Felt **more** prepared for PSPSs after they received batteries
- ✓ Felt **good** about the customer care provided and
- ✓ Provided **positive** feedback on the program

Steps to help select backup power

A portable electric generator or a portable power station can help provide electricity to the appliances, devices and systems that you need most in an emergency. But they can also be loud, costly and potentially pose safety hazards. If you decide that a portable generator is right for you, it is essential to learn how to safely operate the device prior to an emergency. Generators also require proper storage, access to fuel and regular safety checks.

Types of generators for home use

<https://www.pacificpower.net/outages-safety/storm-emergency-prepareddness/backup-generators.html>

A photograph of a wooden utility pole with several power lines extending across the frame. The background consists of rolling green hills under a clear blue sky. A white horizontal bar is overlaid on the middle of the image, and an orange horizontal bar is at the bottom. The text 'Grid Hardening' is written in black on the white bar.

Grid Hardening

Line Rebuild California

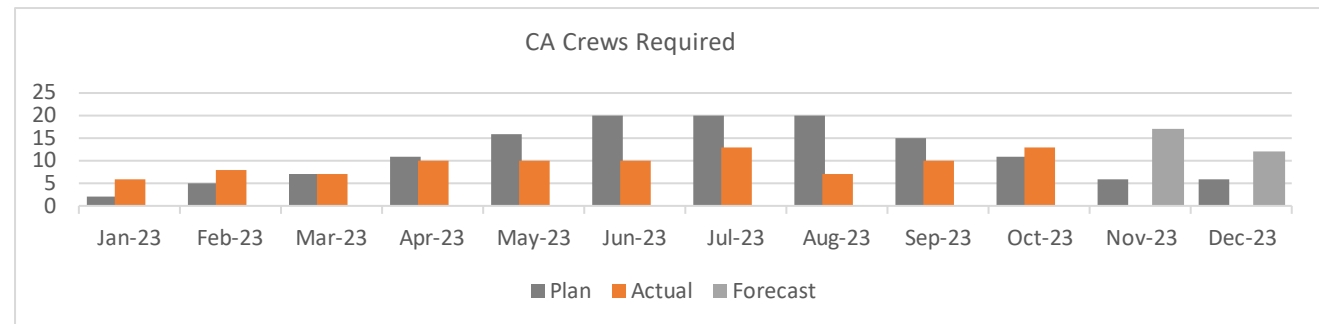
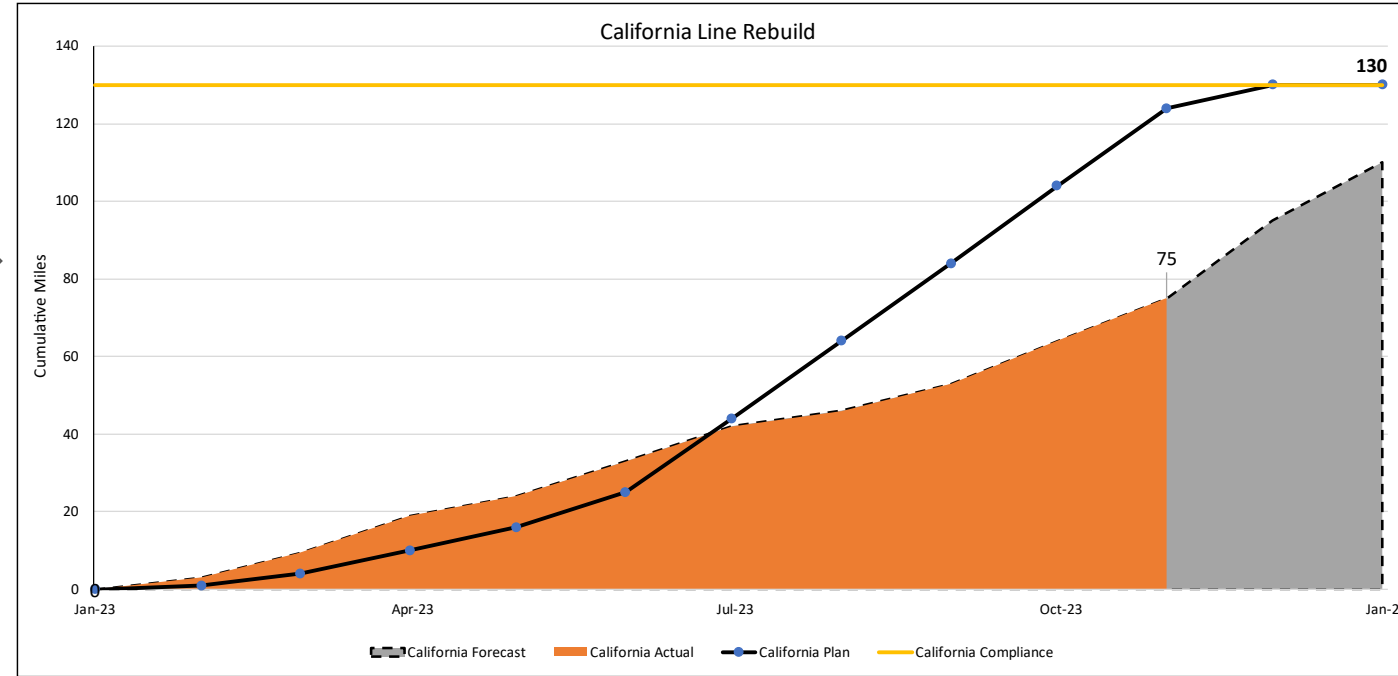
Covered conductor installation

Status as of: October 31, 2023

Status of Planned Miles							Total
Scoping	Design	Permitting	Materials	Construction	Completed		
0	0	0	0	55	75		130

Potential Challenges:

- Construction Crews
 - Crews are being secured for the final 2023 planned projects which are ready for construction.
 - Crew count increased in October and forecast to increase again in November.
- Critical permits still needed for projects
 - Major permits for 2023 construction received, many 2024 permits in process.

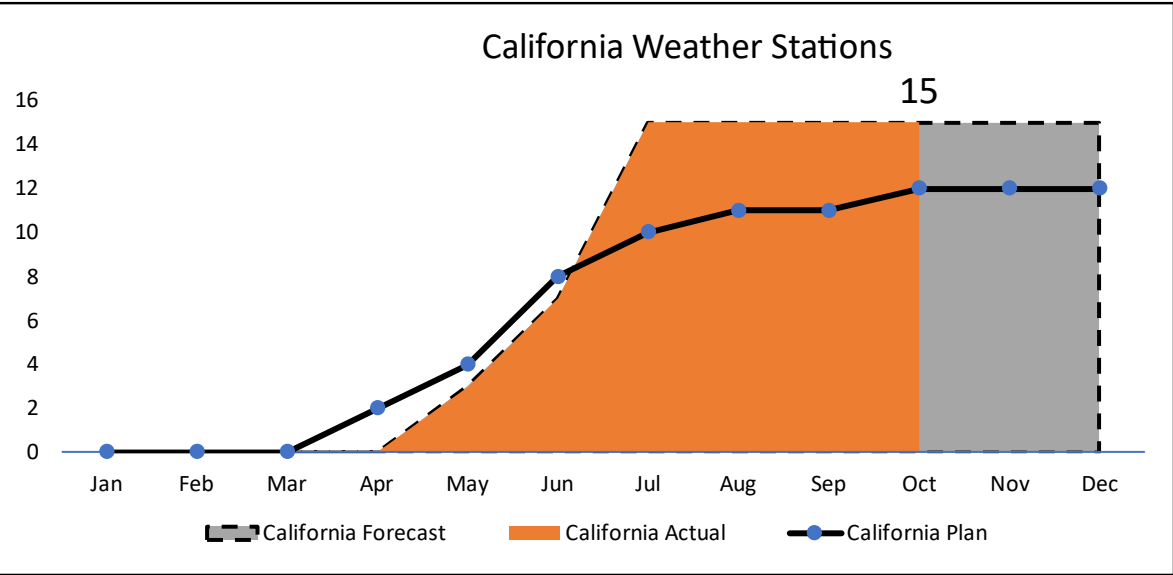
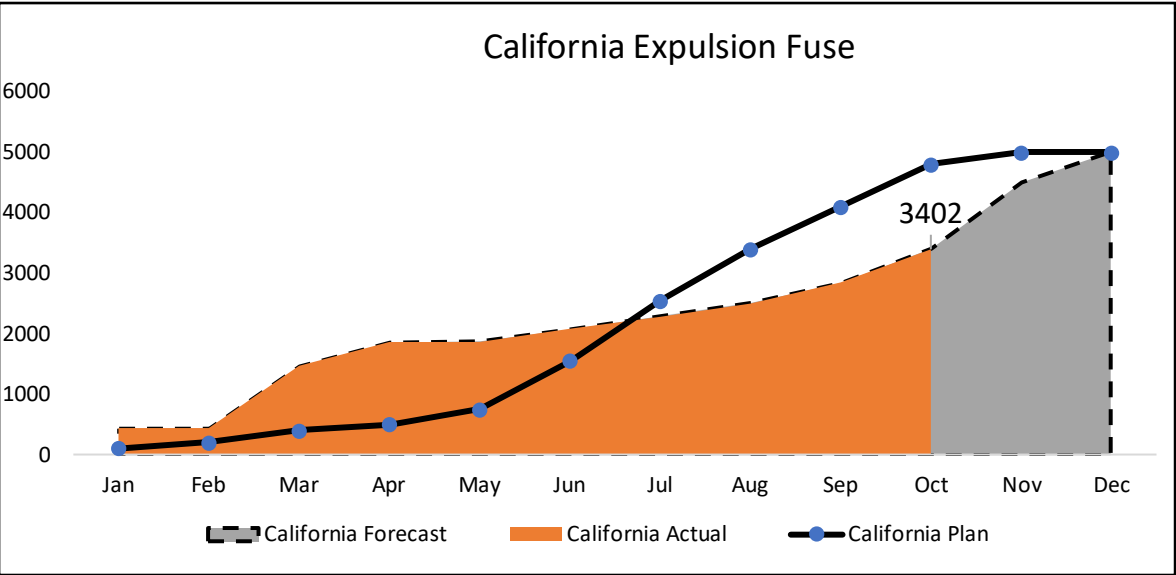
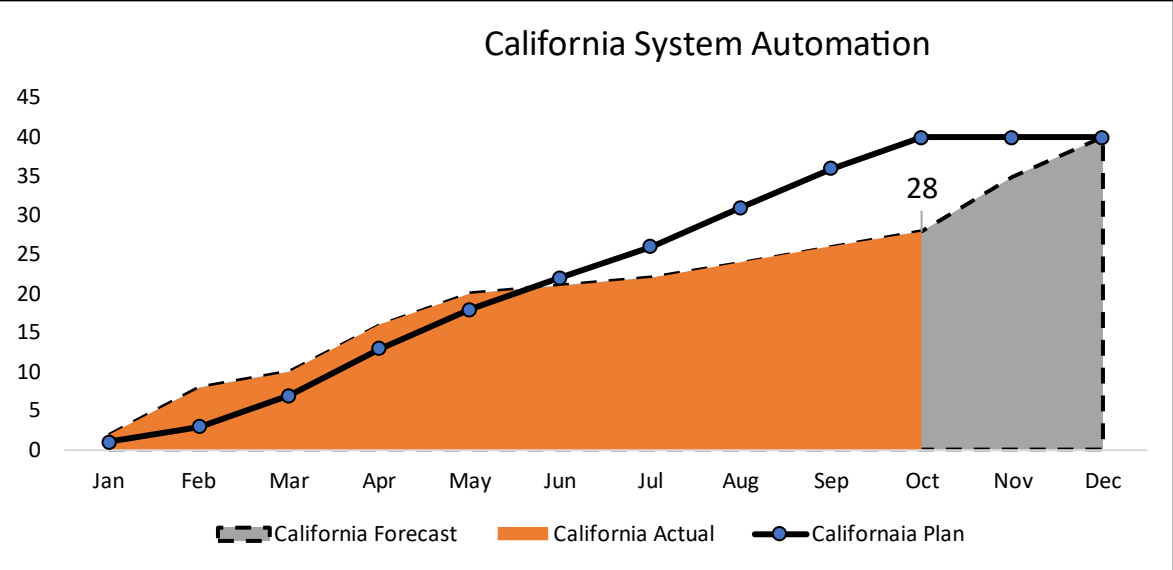


	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
Plan	16	25	44	64	84	104	124	130	130	130	130	130
Actual	38	63	63	76	84	101	106	108	130	130		
Forecast											130	130

System Automation, Weather Stations and Expulsion Fuse Replacements

Status as of: October 31, 2023

- Programs are currently on track to meet 2023 plan targets
- SMU-20 type fuse construction has started. Awards have been made to complete 2023 scope in 2023.
- System Automation work planned for Crescent City resumed in September after the system was returned to normal mid-month.



A man in a blue shirt is seen from the side, working at a computer workstation in a server room. The room is filled with server racks and multiple monitors displaying various data visualizations, including charts and tables. The scene is dimly lit, with the primary light source being the screens. A semi-transparent white box with an orange border is overlaid on the image, containing the text 'Elevated Fire Risk Settings (EFR)'.

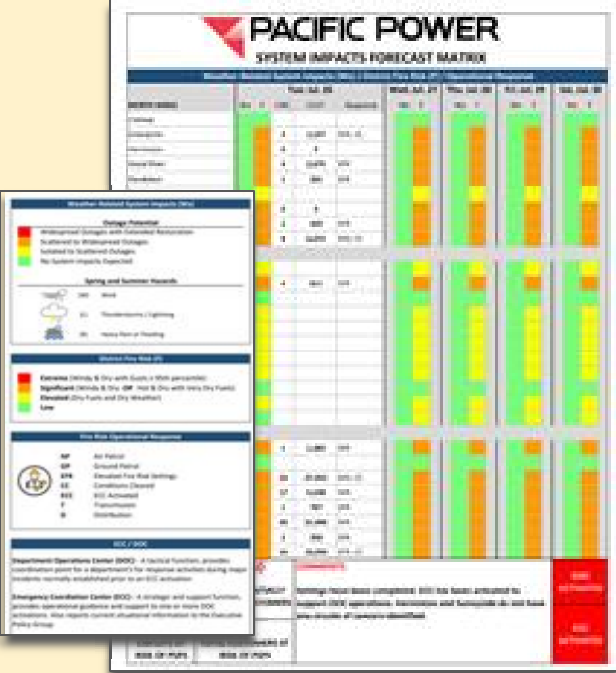
Elevated Fire Risk Settings (EFR)

Elevated Fire Risk (EFR) Settings

- Pacific Power is upgrading relays and reclosers (grid hardening)
- These upgraded devices are now capable of multiple types of settings or “modes”, including Elevated Fire Risk (EFR) settings
- While no two circuits are the same, EFR settings are designed to clear faults in **< 1 second** and limit arc energy, as compared to traditional schemes where clearing times can be 4-10 seconds

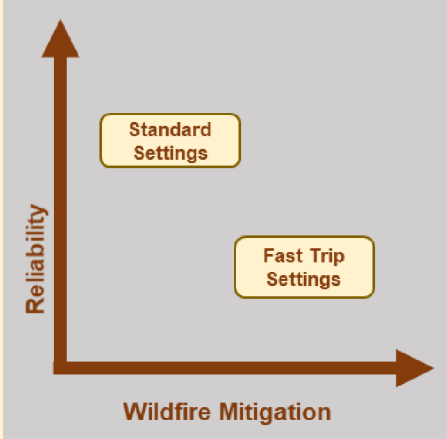
Risk-Based Application

- EFR Settings are deployed using a **risk-based** approach
- Daily reports are used to determine whether EFR settings are needed
- Standard outage notification and communication protocols are followed
- **Enhanced patrolling** performed during restoration



Deployment of CFCIs

- **Risk based deployment** of EFR settings can still have an inverse impact on reliability
- Deployment of CFCIs (fault indicators) **improves restoration time** and can **reduce impact** to customers



EFR Activations and Outage Investigations

- New engineering team (**Real-Time Engineering**) added to Control Center
- Leads outage investigations for EFR related outages to determine root cause and **implement corrective actions** to mitigate future occurrence
- Advises Control Center EFR activations to **further reduce impact to customers**

Next Steps

- Questions
- Suggestions for meeting topics
- 2024 Meeting series (April and November)



Thank you!

Contact: Nora Yotsov | Eleonore.Yotsov@PacifiCorp.com | 503-813-5253