

APPENDIX B



California Wildfire Advisory Board

Wednesday, March 20, 2024

9:00 a.m. - 10:30 a.m.

Presenters:

Kevin Schiedler, Director, Wildfire Mitigation Program

Kevin Benson, Director, Asset Risk

Jonathan Connelly, Director, Asset Management

Nora Yotsov, Director, Emergency Management

Chris Walsh, Meteorology Operations Manager

Lisa Corbly, Senior Emergency Management Planner

Tyler Averyt, Emergency Manager



Agenda

Introductions and Objectives

Service Territory refresher

PSPS History and Risk

- Overview and what's new in Situational Awareness

2024 Fire Season Preparation efforts

- Emergency Planning feedback

- Exercise and outreach efforts

- AFN and MBL customer update

- Backup Generation and Portable Battery programs

- Grid Hardening Update

- Elevated Fire Risk Settings (EFR)

- Encroachment Policy

Q &A

- Open discussion

- Suggestion for meeting topics



Introductions

Wildfire Advisory Board members

- Name and Affiliation

Pacific Power

- Nora Yotsov, Director, Emergency Management
- Chris Walsh, Meteorology Operations Manager
- Tyler Averyt, Emergency Management Program Manager
- Kevin Schiedler, Director, Wildfire Mitigation Program
- Kevin Benson, Director, Asset Risk
- Jonathan Connelly, Director, Asset Management
- Jill Drinkwater, Regional Business Manager
- Lisa Corbly, Senior Emergency Management Planner
- Tracy Moreland, Tribal Liaison Representative
- Pooja Kishore, Regulatory Affairs Manager

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

March	Q2 Meeting	Wildfire Season preparation
November	Q4 Meeting	End of Year Wrap Up and Lessons Learned

- Follow up on action items from previous meetings



PacifiCorp's Service Territory (refresher)

General Stats

PacifiCorp provides electricity to approximately **45,000 California customers** via **62 substations**, **3,100 miles** of distribution lines, and about **730 miles** of transmission lines across nearly **11,000 square miles**

HFTD

Heightened Risk of Wildfire

Approximately **1,100 miles** or 34% of all **overhead lines** are located within the HFTD

~810 miles of overhead distribution in the HFTD;

~340 miles of overhead transmission in the HFTD



2023

Accomplishments

Replaced 96 miles of bare conductor with **insulated covered conductor**

Replaced 5 miles of bare conductor with **underground conductor**

Upgraded **36 reclosers, relays, and circuit breakers** for enhanced protection and control

Installed 4,297 expulsion fuses

HFRA

High Fire Risk Area

~600 miles or 19% of all **overhead lines** are located within the HFRA

~490 miles of OH distribution in the HFRA;

~120 miles of OH transmission in the HFRA

System Wide Initiatives

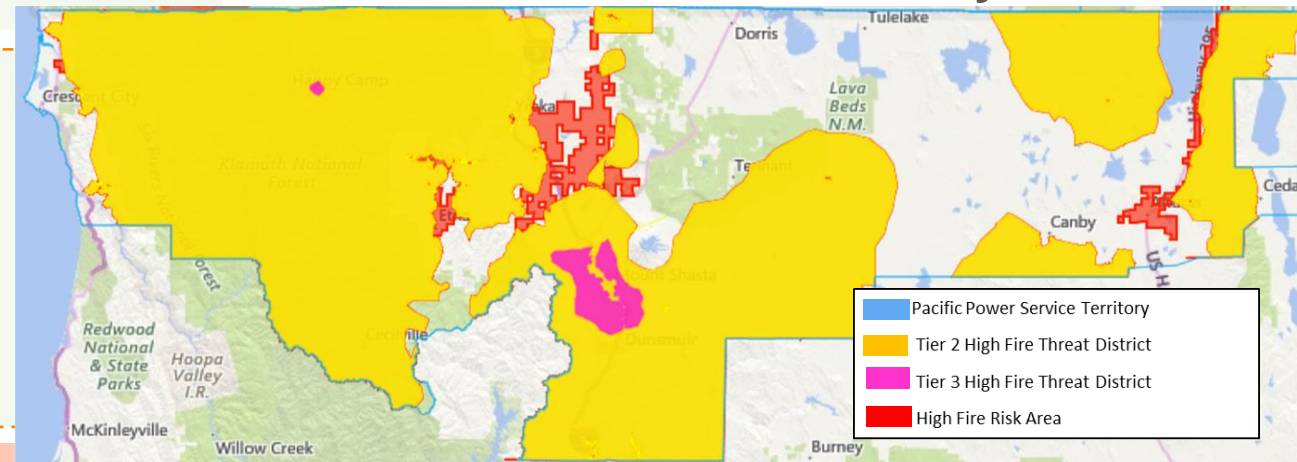
- ✓ Weather Stations
- ✓ Situational Awareness
- ✓ Operational Protocols
- ✓ Community Education and Outreach

Program Changes

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



California Service Territory





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	71	July 1	Oct 9	11

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

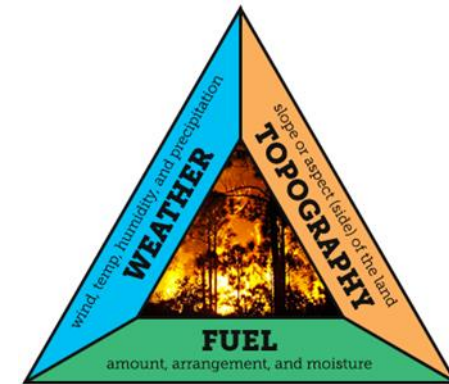
Mitigating Impacts of PSPS with:

- 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)

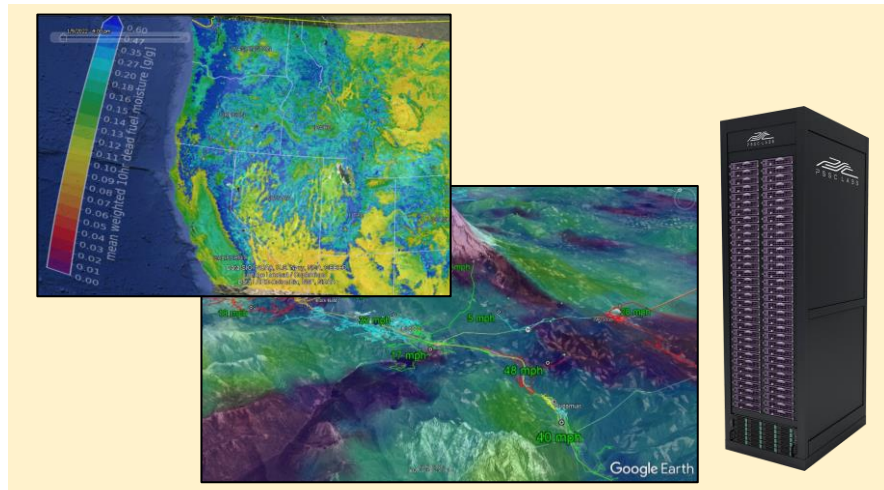


Fire Behavior Triangle

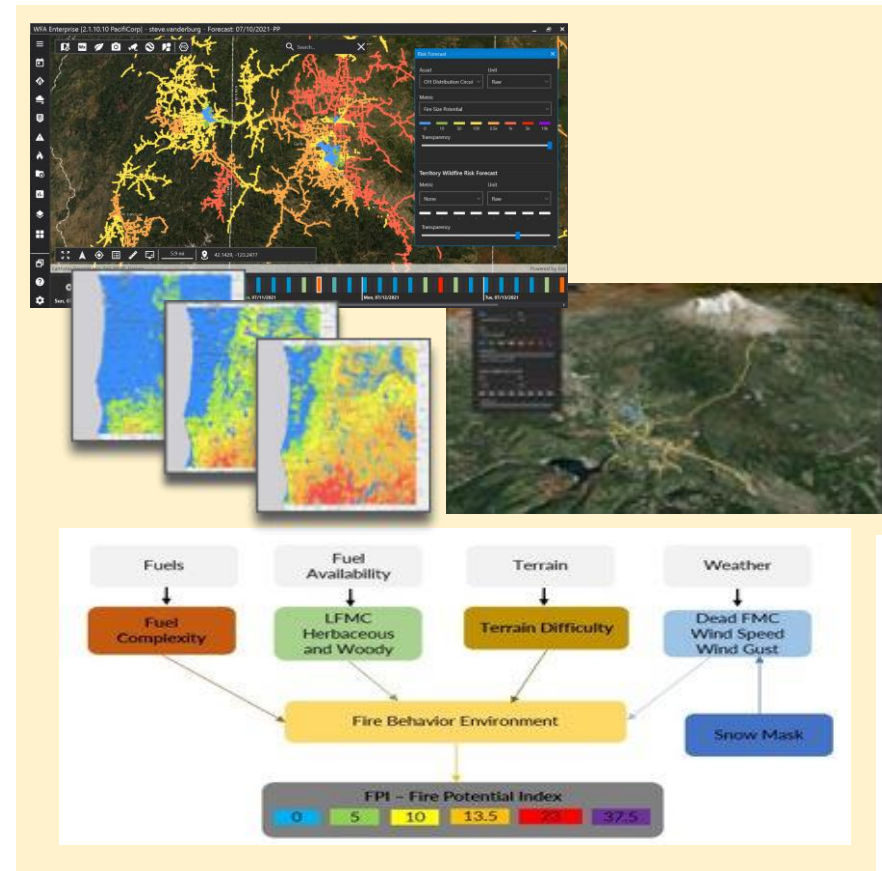
Situational Awareness

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



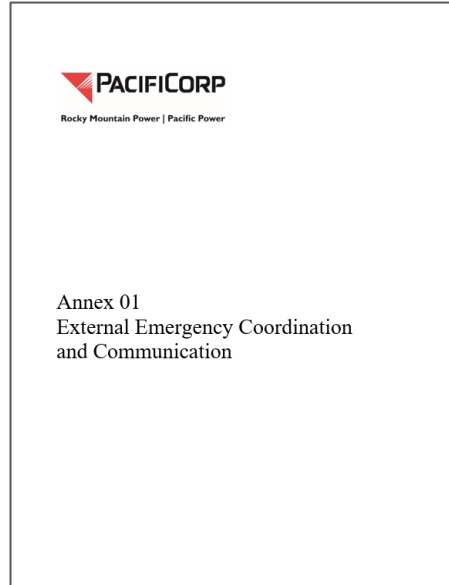
2024 Plan – Fire Potential Index





2024 Fire Season Preparation Efforts

Emergency Response Plan



Informed by

- ✓ Community events
- ✓ Real world events
- ✓ Trainings and exercises
- ✓ Other planning processes
- ✓ Your feedback!

- All hazard approach to incident management
- Incident management structure
- Resourcing and mutual assistance
- Internal communication strategies
- Training and exercise
- Public safety partners
- Regulators
- State and elected officials
- Other utilities
- Media
- Customers

Incident Coordination and Communication with External Partners

Notification

- PAC Field/System Operators notifies 911
- PAC Emergency Management notifies external incident management teams, state ESF12, local governments
- PAC Regulatory Coordinator notifies regulatory bodies
- PAC Government Affairs notifies policy staff, elected officials, state officials, Governor's office, legislators, tribal governments
- PAC Emergency Management or System Operations notifies neighboring utilities
- PAC Customer Service notifies customers via emails , text, phone calls
- PAC Corporate Communications notifies public via social media, media alerts

Are there any gaps?

Coordination

Emergency Management

- coordinates with public safety partners
- may deploy to local emergency operations centers or impacted area

Regulatory Coordinator and State Regulation Group

- communicates with regulatory bodies

Government Affairs

- communicates with policy staff, elected officials, legislators, tribal governments

Corporate Communications

- tailors media release and manages all public facing communications
- updates website with community resource information
- may deploy a PIO to the incident

Regional Business Managers

- conducts business and community outreach and serve as a conduit of information to/from customers
- may deploy to the incident

Customer Service

- integrated voice response telecommunications system provides outage location, cause, restoration time
- additional communication and coordination with customers with access and functional needs (i.e. escalate needs, confirm restoration of power, translate messages) during major outages
- website outage map: customer count, time outage began, expected restoration time, outage cause, status of crew responding to outage by zip code.

How is this approach working for you?

Areas for improvement?

PSPS Playbook

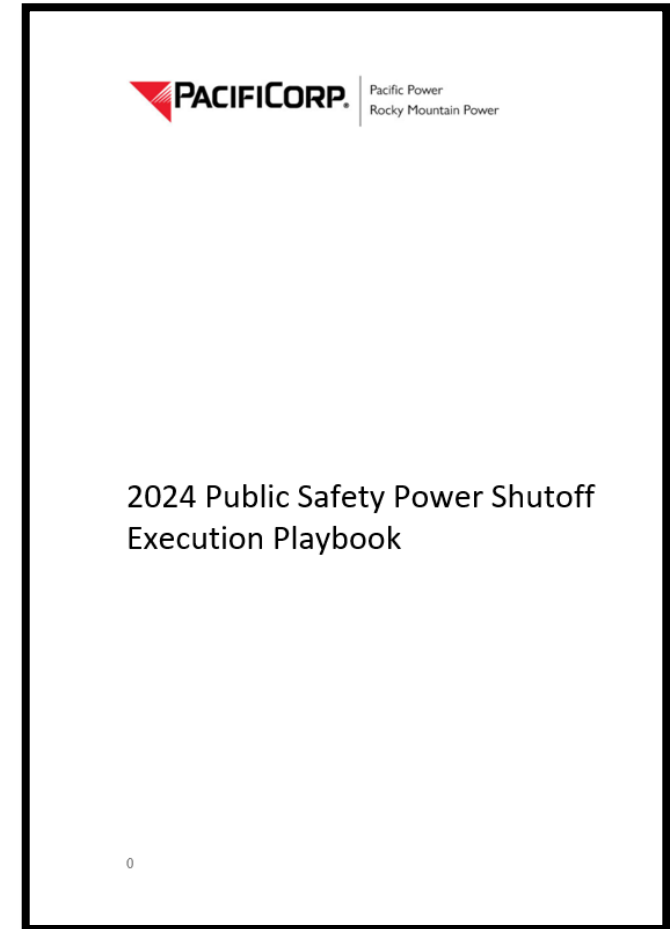
Overview-

- Purpose
- Rolls & Responsibilities
- Notification timelines
- Checklists

Level	Description
PSPS Watch	Public safety circumstances require enhanced situational monitoring is required and a de-energization event is possible to occur
PSPS Warning	Public safety weather forecasts are such that a de-energization event will likely occur
PSPS Cancellation	Public safety circumstances are such that PSPS actions are no longer necessary, make notifications the same as event end. This may occur prior to execution during watch or warning phases.
PSPS Execution	Public safety circumstances are such that de-energization actions are in progress
PSPS Restoration	Public safety circumstances are such that restoration actions have begun
PSPS Event End	All restoration is complete

2024 Updates-

- Terminology updates
- New application integration
- Refined job responsibilities



Please provide feedback by Wednesday March 27th to PPEM@pacificcorp.com

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

- ✓ Tabletop and functional PSPS exercise in Modoc County
- ✓ New Public Safety Partner Portal
- ✓ Installation of 6 more Wildfire Detection Cameras
- ✓ Continued partner & community support
- ✓ Transportation solutions during PSPS events



Ways to stay safe and informed

- KEEP CONTACT INFORMATION UP TO DATE** Your **PacificPower** app makes sure your contact information is current and accurate, so we can best serve you in the event of a power outage.
- INFORM US OF MEDICAL NEEDS** If you or someone in your home has a medically-dependent medical need, call us at **1-888-221-9939** 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** From outages, update contact info and do more with our **Pacific Power** app.
- TEXT OR CALL US** Text **OUT** to **722797** to report your outage or **911** for critical issues. You can also report outages or check status by calling **1-877-938-8888**.

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 evening, please visit **PacificPower.com/Prep** or call us at **1-888-221-9939**.
To receive a folder from our representatives, please call us at **1-888-221-9939**.

RECOMMENDED ITEMS FOR A BASIC EMERGENCY SUPPLY KIT

- 1 to 3-day supply of portable food for all people and pets in your home
- One gallon of water per person per day
- Handgrips and extra batteries
- Battery-powered radio and extra batteries
- Solar phone chargers
- Batteries and/or sleeping bag
- One change of clothes and shoes per person
- Wrench or pliers to turn off utility
- Manual can opener
- Shovel
- First aid kit
- Prescription medications and any necessary medical equipment
- Cash
- Family contact sheet (see next section)
- Copies of important documents

Make an evacuation plan & contact sheet

- It's never too late to plan ahead and come up with an evacuation 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

SAFETY APPLIANCES
Produce electronics like TVs and computers with surge protectors, unplug them when the power goes out and learn how to unplug your garage floor coverer.

INVEST IN A BACKUP POWER SOURCE
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. It is essential to have them in a safe, well-ventilated area away from your home. In an emergency, emergency services may require that you have a fire extinguisher nearby to use and regular safety checks. Visit **PacificPower.com/Prep** for additional information about backup power options, with brochures and related available in our partner centers.

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.
- They can also enroll in Pacific Power’s Medical Baseline Program.
- All medical customers are identified as AFN customers.

The screenshot displays three sections of the Pacific Power website:

- Medical Baseline Program:** Explains that if a family member has a serious medical condition, customers can receive 500 additional kilowatt-hours per month. It also mentions the Medical or Life Support Equipment Certificate.
- California Alternate Rates for Energy Program (CARE):** States that customers with a 20 percent discount on their bill may be eligible for CARE. It lists other programs like Medi-Cal, Women, Infants and Children Program (WIC), Supplemental Security Income (SSI), Bureau of Indian Affairs' Head Start Income Eligible (Head Start) or Temporary Assistance for Needy Families (TANF) or SNAP.
- Outage preparedness:** Provides a checklist for emergency kits, including flashlights, fresh batteries, solar phone chargers, first aid kits, and emergency back-up plans.



2024 Improvements

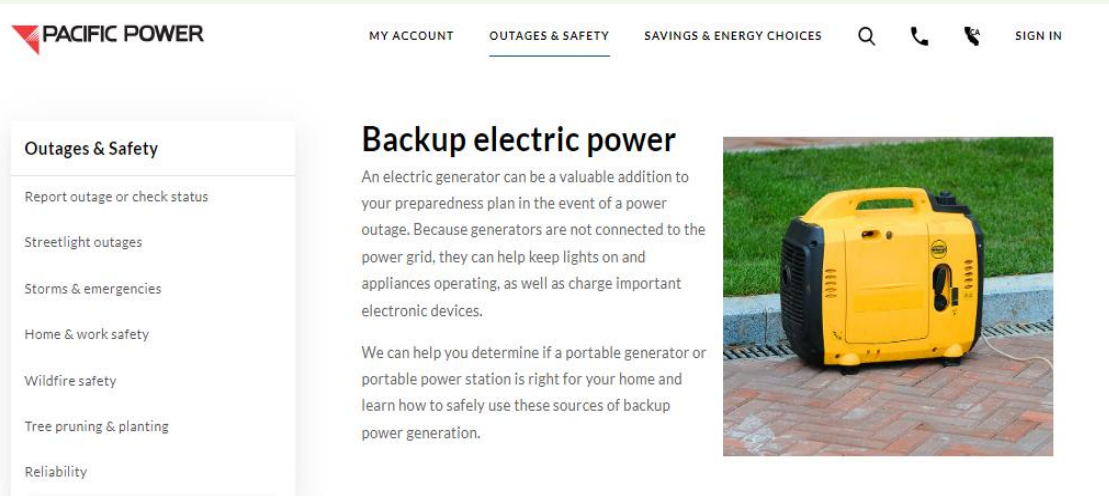
- PacifiCorp continues to seek improvements to identifying the electricity dependent customers with AFN through defining, mapping, and enabling self-identification, and has mapped their respective databases to code customer accounts accordingly
- As a part of the planning process, the team also worked 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 February 2024, **2,348 customers** in PacifiCorp’s databases have a medical code on their account. This represents an increase of **almost double** from the last report.
- All medical baseline customers are identified as AFN customers.

2023 - 2024 AFN Customer Counts

2023 AFN	2024 AFN	Total Increase
1204	2348	1144

Backup Generation and Portable Battery Programs

NEW Website and Reference Material



The screenshot shows the Pacific Power website's 'Outages & Safety' section. The main article is titled 'Backup electric power' and discusses the benefits of electric generators. A yellow generator is shown in a photograph. The website header includes 'PACIFIC POWER' and navigation links like 'MY ACCOUNT', 'OUTAGES & SAFETY', 'SAVINGS & ENERGY CHOICES', and 'SIGN IN'. A sidebar on the left lists various outage and safety topics.

Choose your state for more about generators, safety and possible rebates

[IS BACKUP POWER RIGHT FOR YOU?](#)

[USE BACKUP POWER SAFELY](#)

[CALIFORNIA GENERATOR REBATES](#)

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-preparedness/backup-generators.html>

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)

*581 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, 81 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

A utility pole with power lines against a backdrop of rolling green hills under a clear blue sky. The pole is made of wood and has several cross-arms. The background shows a valley with green hills and a small town in the distance. The sky is a clear, light blue.

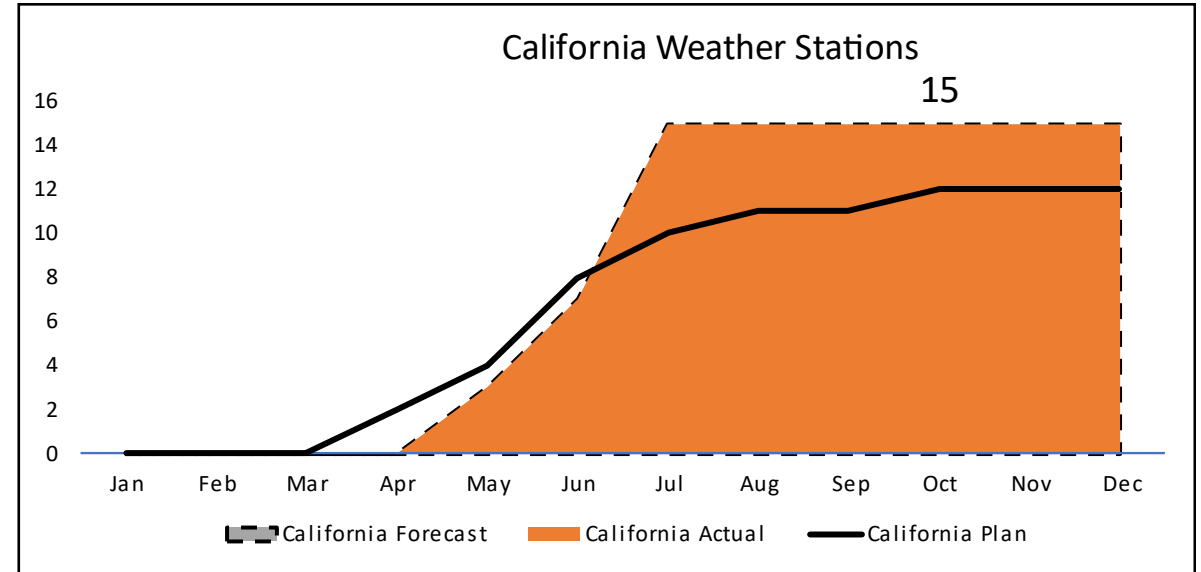
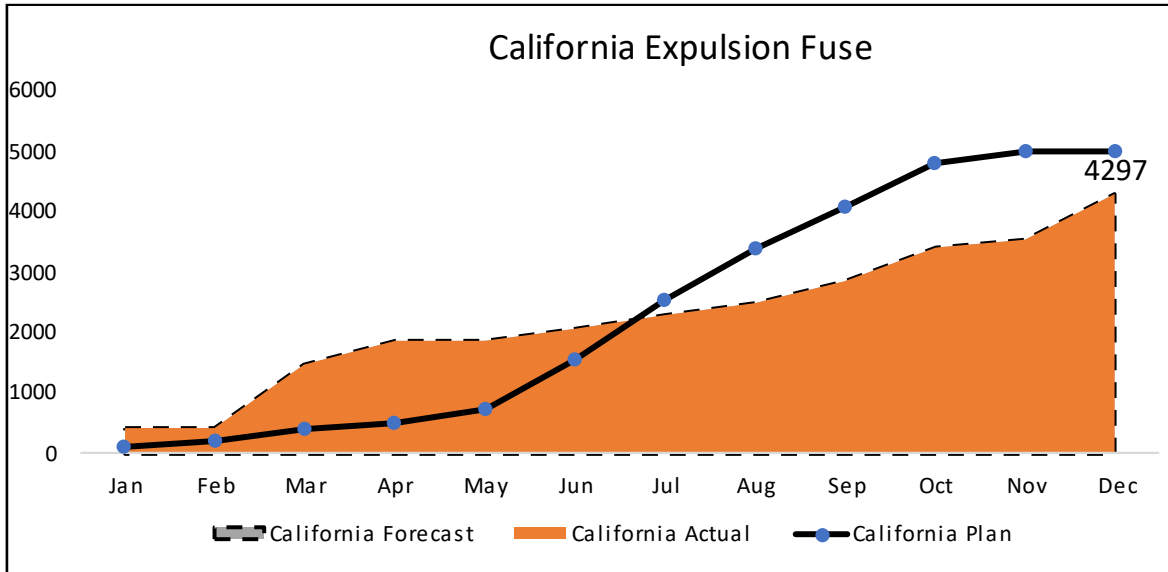
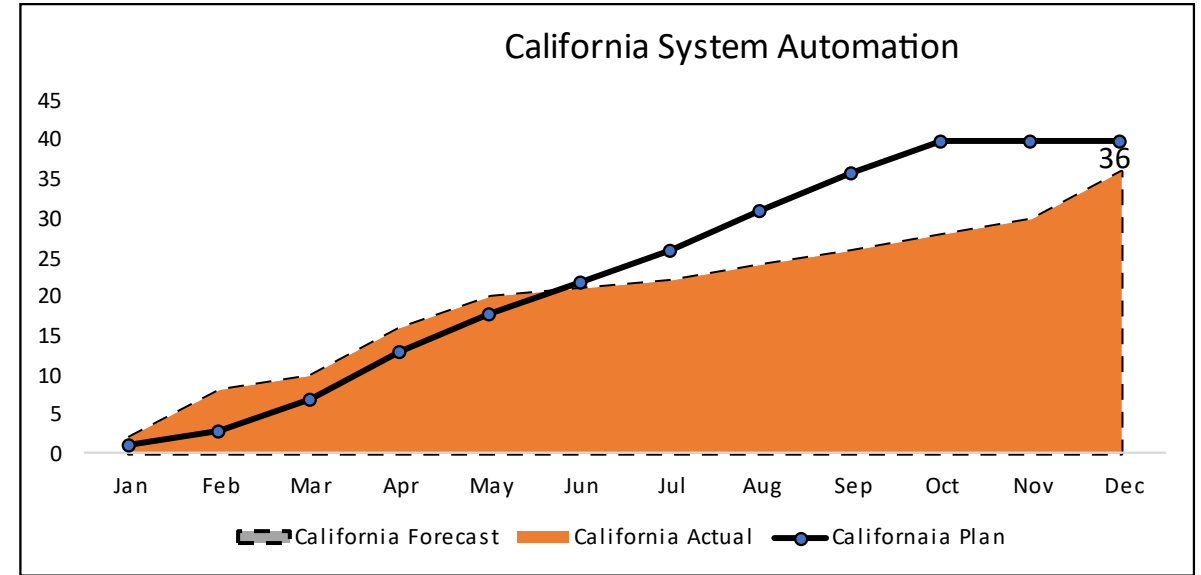
Grid Hardening

System Automation, Weather Stations and Expulsion Fuse Replacements

Status as of: December 31, 2023

2024 Plan:

- 20 System Automation Units
- 1,000 Expulsion Fuse replacements
- 10 Weather Station installations





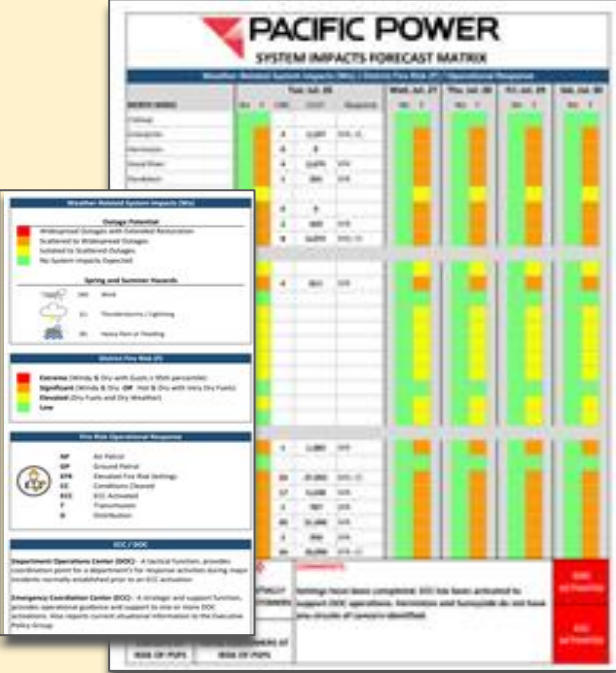
Elevated Fire Risk Settings (EFR) and Encroachment Policy

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

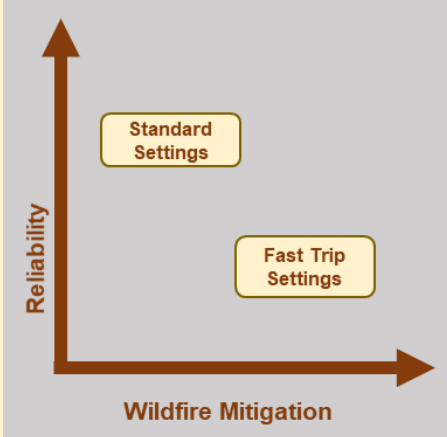
Risk-Based Application

- 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

Encroachment Policy

- Pacific Power will sometimes de-energize power lines when there is an active wildfire threatening the lines.
- For example, fire suppression authorities may request de-energization of lines to protect fire fighters working in the area, and Pacific Power generally always accommodates those requests.
- Other times, Pacific Power may itself initiate a de-energization after receiving information about an advancing fire, to reduce risk of energized electrical equipment contributing to the fire spread or endangering fire personnel.

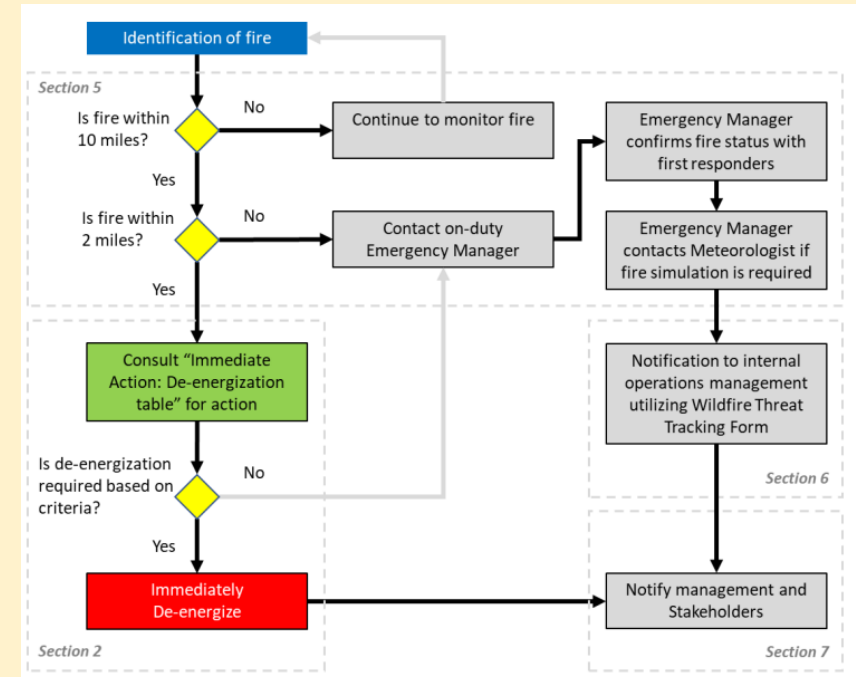
Immediate Action to De-Energize based on Fire Location (Distance) relative to Assets

Distance thresholds based on:

- Voltage (Bulk Electric, Sub-Transmission, Distribution)
- System configuration (Looped, Radial, All)
- Design (Wood, Steel, All)
- Weather (Daily Weather Risk Matrix and Wind Gusts)



Wildfire Encroachment System Operations Procedure SOP-203



Next Steps

- Questions and open discussion
- Suggestions for meeting topics



Thank you!