

## APPENDIX C



# California Wildfire Advisory Board

Thursday, April 20, 2023

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

## Presenters:

Carrie Laird, Managing Director, Power Delivery Support

Nora Yotsov, Director, Emergency Management

Steve Vanderburg, Meteorology Manager



# Agenda

Introductions and Objectives

Service Territory refresher

PSPS History and Risk

- Overview and what's new in Situational Awareness

Preparedness

- Education and Outreach
- PSPS Notification process and Community Resource Centers
- Medical Baseline and Access and Functional Needs identification and resources
- Public Safety Partner portal

Grid Hardening Update

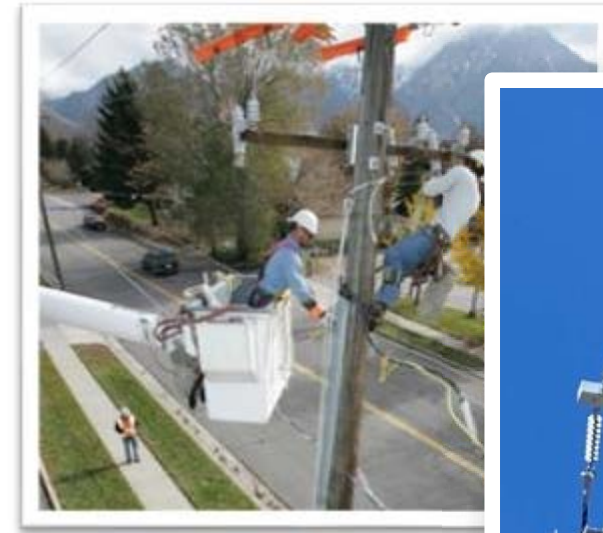
Current and planned projects progress

Elevated Fire Risk Settings (EFR)

Q &A

- Open discussion

Next Steps





# Introductions

## Wildfire Advisory Board Members

- Heather Hadwick, Modoc County Emergency Services
- Hector Corral, California Public Utilities Commission
- Bryan Schenone, Siskiyou County Emergency Services
- Jason Bedbettter, City of Yreka
- Gary Freeman, Community AFN Administrator
- Matthew Bryan, City of Dunsmuir
- Nancy Ogren, Siskiyou County
- Veronica Rivera, College of the Siskiyou's
- Ed Valenzuela, Mt. Shasta Region, Siskiyou County
- Giselle Nova, Siskiyou County Fire Council
- Paul Hamann, Roseburg Forest Products
- Josh Saxon, General Manager, Karuk Tribe
- Gary Freeman, Community AFN Representative
- Chester Robertson, Modoc County
- Scott Steinbring, Karuk Tribe
- Amos Pole, Yurok Tribe
- Fred Kiplinger, Redwood Coast Resource Center
- Adam Heilman, Siskiyou County
- Maia Mello, Del Norte County
- Neal Lopez, Del Norte County

## Pacific Power

- Carrie Laird, Managing Director Power Delivery Support
- Nora Yotsov, Director of Emergency Management
- Steve Vanderburg, Meteorology Manager
- Tyler Averyt, Senior Emergency Management Specialist
- Todd Andres, Regional Business Manager
- Jona Whitesides, Senior Communications Representative
- Pooja Kishore, California 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

April  
November

Q2 Meeting  
Q4 Meeting

Wildfire Season preparation  
End of Year Wrap Up

**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-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 [pacificpower.net/wildfiresafety](http://pacificpower.net/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.

**PACIFIC POWER**

**What are some tools to help you plan?**

- Visit [pacificpower.net/jspis](http://pacificpower.net/jspis) 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 [pacificpower.net/wildfiresafety](http://pacificpower.net/wildfiresafety).

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

**PACIFIC POWER**

We work hard to clear plants and trees away from our power lines, but debris, tree limbs and other material can be blown onto lines by high winds. A spark could lead to the rapid spread of wildfires when strong winds are combined with high temperatures, low humidity and other dangerous conditions.

Turning power off in areas experiencing hazardous weather conditions may be necessary to ensure the safety of your community. We take the decision to turn off power in high-risk areas seriously and we expect that Public Safety Power Shutoffs will be rare.

**ADVANCE WARNING**

Whenever possible, we will provide advance notice of a Public Safety Power Shutoff. Although worsening conditions may require swift action, our goal is to alert you before a shutoff.

**CONTINUED UPDATES**

As conditions change on the ground, we will keep you informed before, during and after a Public Safety Power Shutoff. Updates will be provided through our website, text messages, phone calls and social media.

**SAFETY INSPECTIONS**

Once the extreme weather conditions have passed, Pacific Power crews will inspect the lines and equipment to clear debris and make repairs if needed before restoring power.

We're committed to providing you with information in the timeliest manner possible. Hazardous conditions can be unpredictable and change rapidly, but typically, here's what you can expect:

**PACIFIC POWER**

# PacifiCorp's Service Territory (refresher)

## General Stats

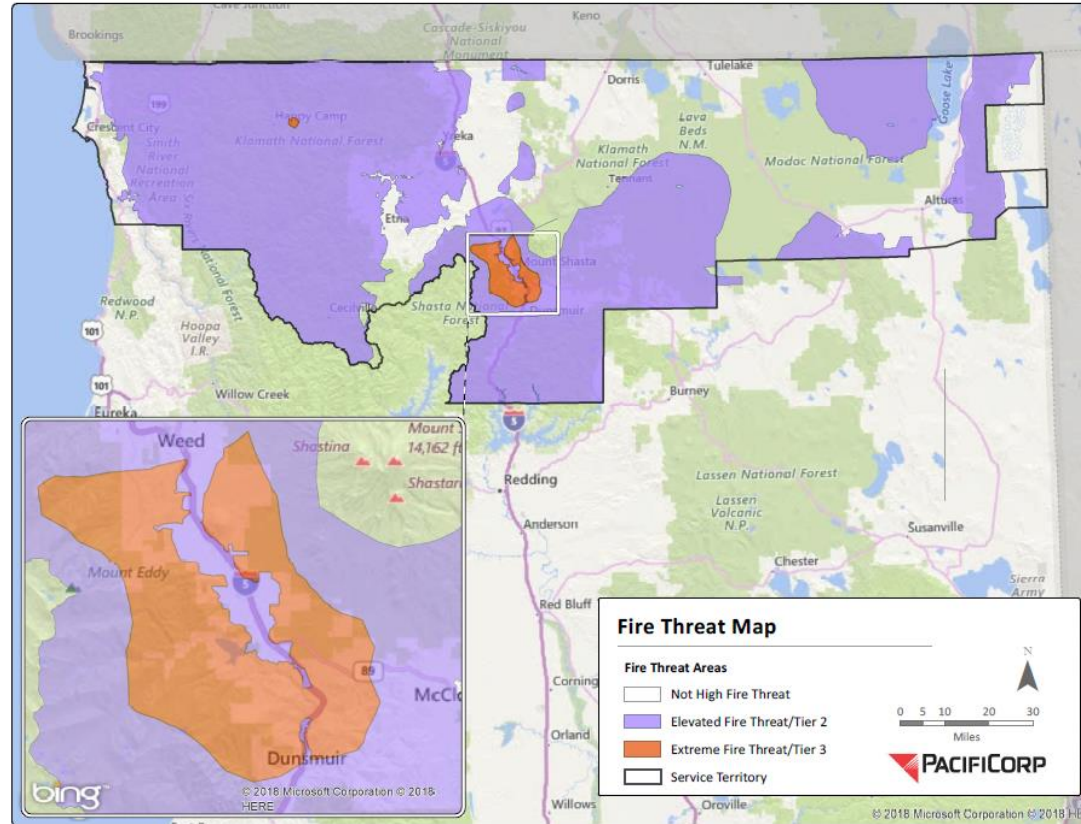
PacifiCorp provides electricity to approximately **45,000 California customers** via **62 substations**, **2,500 miles** of distribution lines, and about **780 miles** of transmission lines across nearly **11,000 square miles**

### 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

### Programmatic Shifts

- ✓ Increased Frequency of Asset Inspections
- ✓ Accelerated Condition Correction
- ✓ Enhanced Vegetation Management



## Extreme Risk

*Extreme Risk of Wildfire*

Approximately **250 miles** or 10% of all **overhead distribution** lines are located within **5 individual PSPS Zones**

### Prioritized System Hardening

- ✓ Covered Conductor
- ✓ 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

## 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

Continue using PSPS as a tool and measure of last resort while:

### Decision incorporates multiple factors:

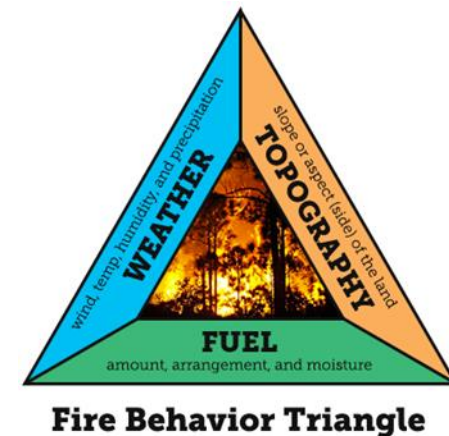
- Real Time Monitoring of Local Conditions
- Weather Forecasting & Risk
- Dynamic Input from Public Safety Partners

### Mitigating Impacts of PSPS with:

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

2022 Accomplishment / Updated Methodology:

- WFA-E Consequence Modeling
- Fire Weather Watches or Red Flag Warnings (RFW)
- WRF Forecasts
- Evaporation Demand Drought Index (EDDI)
- Fuels Conditions (Grasses, Live Fuels, & Dead Fuels)
- Current or Recent Wildfire Activity
- Hot-Dry-Windy Index (HDWI)
- Vapor Pressure Deficit (1-month avg)
- HFTD Location (Y/N)

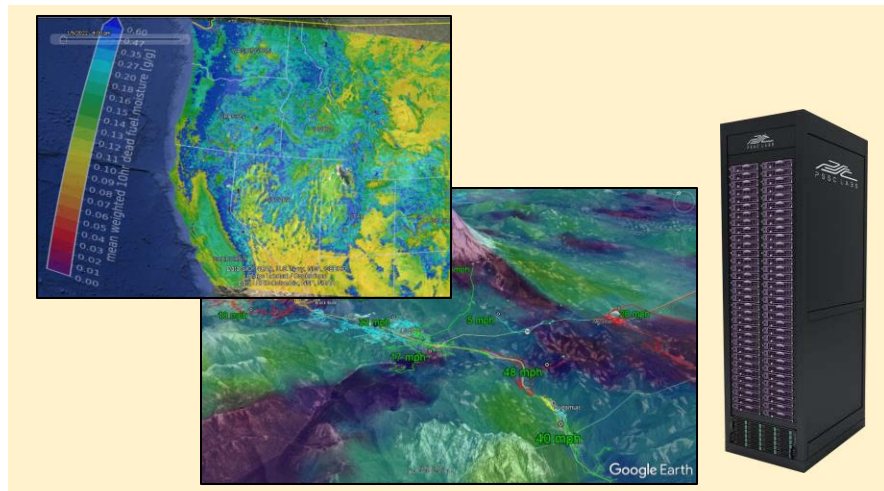




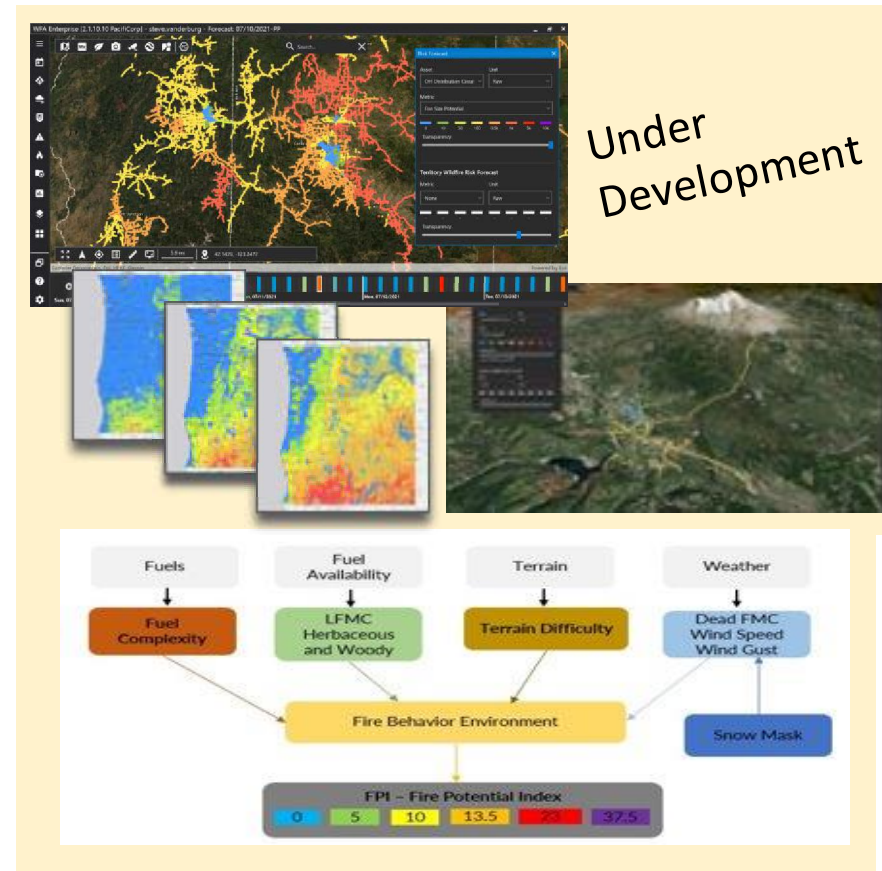
# Situational Awareness

## 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





# Preparedness



# Preparedness Education & Outreach

- ✓ Tabletop exercises with Public Safety Partners
  - ✓ Completed tabletop in Siskiyou County on March 28, 2023.
  - ✓ Conducting functional exercise in Siskiyou County, May 15-18, 2023.
- ✓ Wildfire safety and preparedness campaign included **social media, radio, bill inserts and other online media** (such as Spotify)
- ✓ Updated brochures, flyers and other collateral
- ✓ Updates to improve awareness of customer support programs
- ✓ **Spanish PSPS Website**
- ✓ New 2022 Webinar

EMERGENCY RESPONSE PARTNERS	
✓	Formal collaboration through annual tabletop & functional exercises
✓	Engage and maintain local situational awareness through county emergency manager(s)
✓	Deploy personnel to the local EOC as needed to coordinate responsibilities and distribute information
✓	Situational reporting with county emergency managers
➔	Bring on additional PacifiCorp personnel to support more frequent coordination

CRITICAL INFRASTRUCTURE	
✓	Maintain lists within our new Public Safety Partner Portal (launched June 1st, 2022)
✓	Monthly updates and download capability by public safety partners
➔	Outreach to update primary and secondary points of contact for facilities & collect backup generation capabilities
✓	Facilities can request to be added to our list online from our critical facilities page
➔	Validation of our critical infrastructure with the respective county or tribal emergency managers

TRIBAL PARTNERS	
✓	Twice-monthly meetings with the Karuk Tribe
✓	Frequent collaboration and coordination with the Karuk Tribal emergency manager
➔	Coordinate and provide information to tribal communities via county emergency managers
➔	Align messaging strategies between tribal public information and corporate communications
➔	Bring on additional PacifiCorp personnel to support more frequent coordination





# Notification Plans

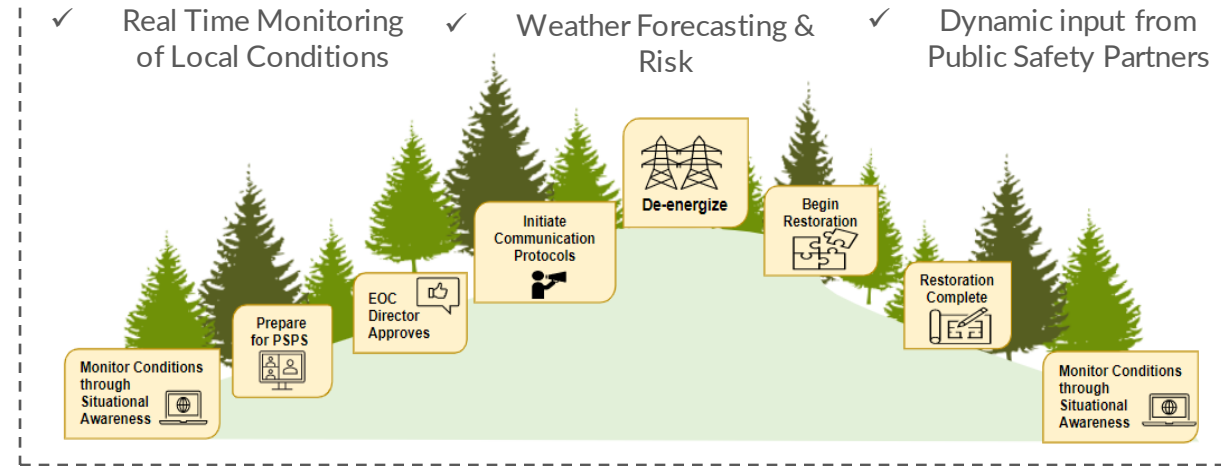
- Once the decision is made to implement a PSPS, Notification Protocols are initiated
- Pending any changes to dynamic weather factors and risk, notifications protocols generally include:

Notification Protocols	
48-72 hours prior	De-energization warning to Public Safety Partners
24-48 hours prior	De-energization warning
1-4 hours prior	De-energization imminent
Event begins	De-energization begins
Re-energization begins	Re-energization begins
Re-energization completed	Re-energization completed
Cancellation of event	De-energization event canceled

- During a PSPS event, notifications to medical baseline and AFN populations are managed separately from general notifications
- Pacific Power performs positive or affirmative communications using various methods:

- Personal Calls
- Text Messages
- Emails
- Home Visit

## General PSPS Protocols



## 2022 Enhancements

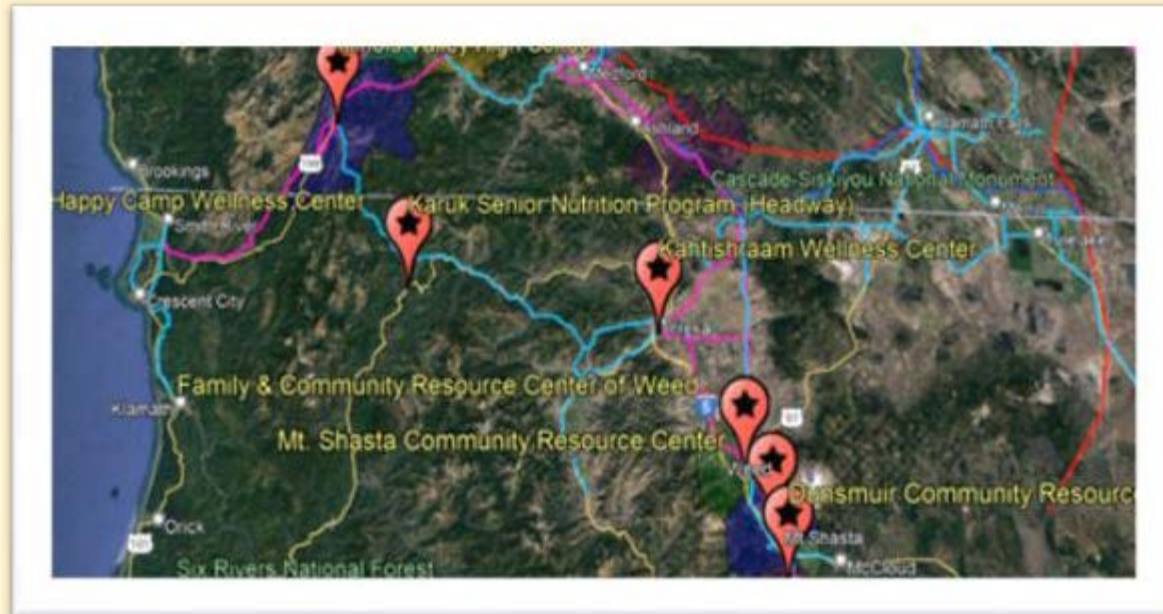
- Enhance ability to better categorize AFN and Medical Baseline Customers
- Strengthen relationships with CBOs



*Example: Initiated contact with Redwood Coast Regional Centers to better understand how to identify and serve AFN populations*

# Community Resource Centers

## Community Resource Centers (CRCs)

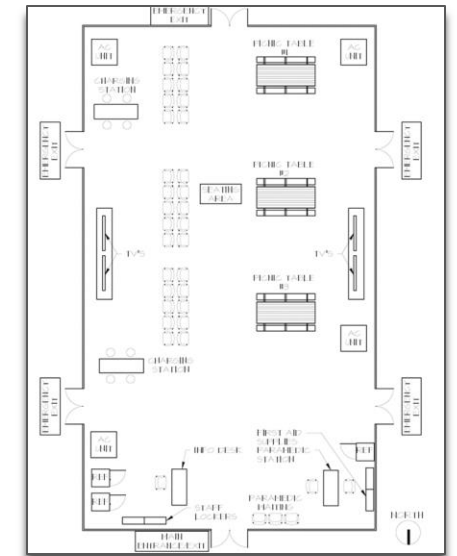


## 2021 Services

- ✓ Shelter from environment
- ✓ Air conditioning
- ✓ Potable water
- ✓ Seating and tables
- ✓ Restroom facilities
- ✓ Refrigeration for medicine and/or baby needs
- ✓ Interior and area lighting
- ✓ On-site security
- ✓ Communications capability such as Wi-fi access, Sat Phone, Radio, Cellular phone etc.
- ✓ Televisions
- ✓ On-site medical support (EMT-A at a minimum, Paramedic preferred)
- ✓ Charging stations

## Enhanced in 2022

- ✓ Air Purifiers
- ✓ Air Quality Monitors
- ✓ Ice
- ✓ Non-perishable snacks
- ✓ Small Crates for Pets
- ✓ Portable ADA Ramp



# 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](http://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.

**Medical Baseline Program**  
If you or a family member is on life support or has a serious medical condition, we can help if you or someone who lives with you full time is required to use an electricity-dependent medical device, let us know. To make it easy, customers receive approximately 500 additional kWh of hours per month, which are billed at the lowest residential tier rate to offset increases in cost and energy use due to medical equipment.  
A Medical or Life Support Equipment Certificate must be completed for a qualified medical professional certifying that a member of the household is using medical equipment on a regular basis required to maintain life or has a medical condition that would be adversely affected if electric service is disconnected.  
The Medical Baseline Certificate does not guarantee that power will not be interrupted from weather-related outages, other circumstances outside of our control, or service disconnection for bill nonpayment. It does help us to better assist you in managing your electricity bills, beyond what is normally allowed. Learn more at [pacificpower.net/medkit](http://pacificpower.net/medkit).

**California Alternate Rates for Energy Program (CARE)**  
If you are having trouble paying your bill, you may be eligible for a 20 percent discount on your Pacific Power bill through CARE. CARE is available to residential customers who meet income requirements.  
You may also be eligible for CARE if you are enrolled in public assistance programs such as Medicaid/ Medi-Cal, Women, Infants and Children Program (WIC), Supplemental Security Income (SSI), Bureau of Indian Affairs Tribal Income Eligible (Tribal Child) or Temporary Assistance for Needy Families (TANF) or Tribal TANF.  
For more information and to see if you qualify, visit [pacificpower.net/care](http://pacificpower.net/care).

**Outage preparedness**  
A storm, wildfire or other emergency can happen at any time. That's why it's important to have a plan ready, year-round, in case power gets cut.  
• Keep a two-week supply of shelf-stable food and water for all people and pets in your home.  
• Gather a backup supply of essential medicines.  
• Create an emergency kit with flashlights, fresh batteries, solar phone chargers, first aid, essential phone numbers and cash.  
• Do not use candles. If oxygen equipment is in use.  
• Check with your medical device supplier to assist with emergency backup plans for any medical equipment.  
• Before leaving a generator, make sure it is appropriate for your home.  
**Update your contact information with Pacific Power.**  
Communication is a big part of staying safe. In the event of a power outage, we will use all available options to keep you informed, including social media and by reaching out to you directly by phone, text or email.  
Qualifying customers would also receive additional notifications prior to a Public Safety Power Shutoff due to severe weather conditions.  
Please take a moment to update your contact information so we can reach you if we need to. Visit [pacificpower.net](http://pacificpower.net) or by phone at 1-888-225-7070.



## 2022 Improvements

- Since February 2022, there has been an increase of 314 total AFN customers (67 percent)
- 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 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
- All medical baseline customers are identified as AFN customers

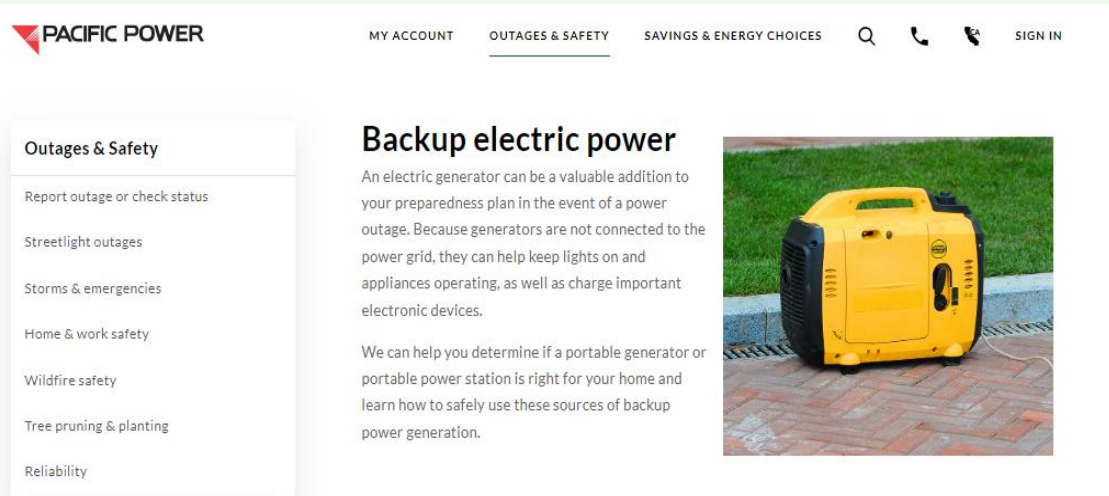
### 2022 AFN Customer Counts

Medical Baseline AFN	Non-Medical Baseline AFN	Total
145	636	781



# 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 portable generators. A yellow generator is shown in a photograph. The website header includes 'PACIFIC POWER', 'MY ACCOUNT', 'OUTAGES & SAFETY', 'SAVINGS & ENERGY CHOICES', a search icon, a phone icon, a mail icon, and 'SIGN IN'. A sidebar menu lists various outage-related 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-prepareddness/backup-generators.html>

## Generator Rebate Program

- Rebate offered on the purchase of a portable generator or portable power station to customers who:
  - Reside in Tier 2 or Tier 3 area
  - **Additional rebate** to Access and Functional Needs (AFN) customers



## Free Portable Battery Program

- Implemented in 2021 to provide back-up batteries – at no cost – to medical baseline customers

### Program Includes:

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

### Customer Feedback:

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





# Public Safety Partner Portal



# Public Safety Partner Portal

## Public Safety Partner Portal

The Public Safety Partner Portal is an online resource that includes Public Safety Power Shutoff planning and event-specific information for public safety partners to support emergency management efforts.

Public Safety Partners include:

- Emergency responders from federal, state, local and tribal governments
- Telecommunications providers
- Water agencies
- Publicly owned utilities
- Emergency hospitals
- Transportation agencies

Maps and other information are updated monthly and can be accessed at any time. In the event of a **Public Safety Power Shutoff**, event-specific information will be made available to portal users before, during and after the outage to support emergency management efforts.



**Public Safety Partner Portal Update**  
*The public safety partner portal will assist PacifiCorp with prioritization of restoration work, backup power evaluation, and communications before and during a PSPS event. The portal is fully operational as of June 2022.*



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

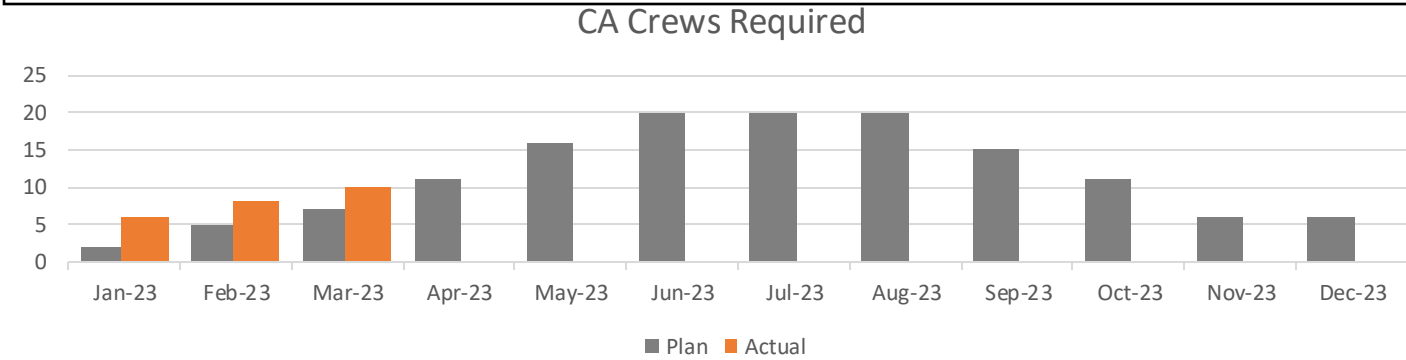
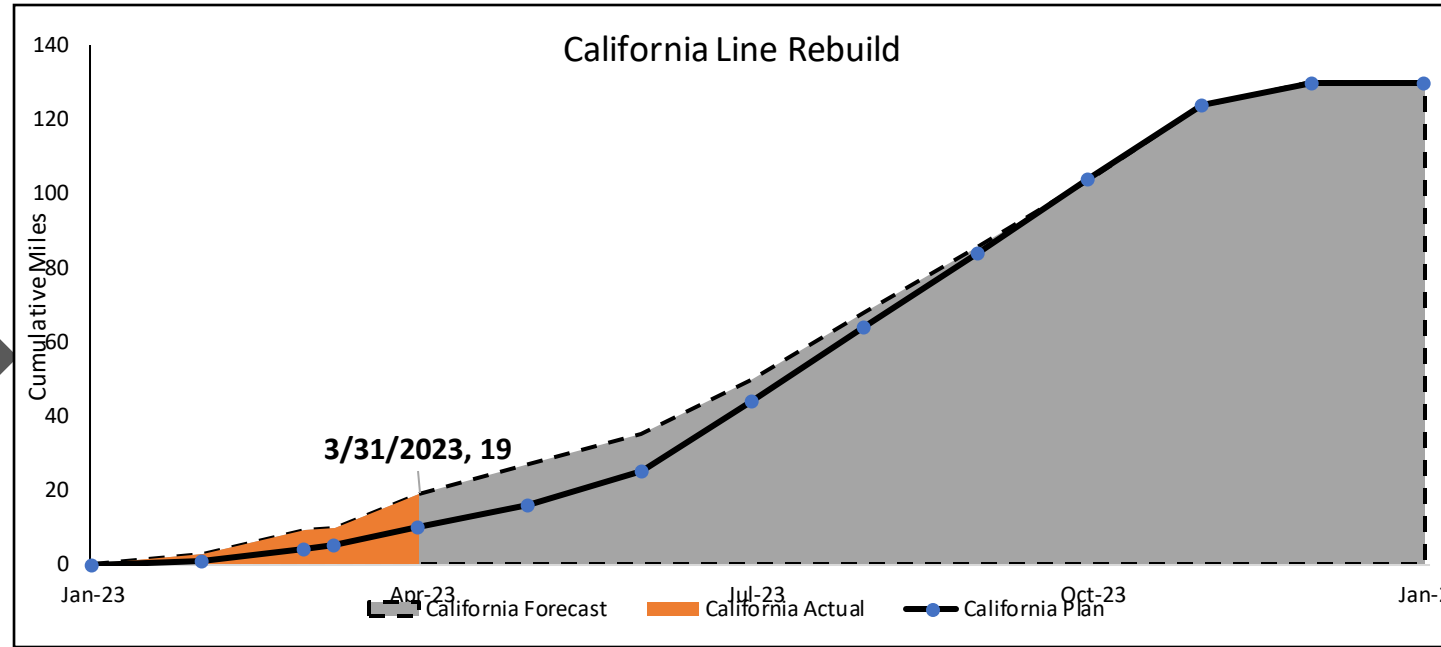
Status of Planned Miles							Total
Scoping	Design	Permitting	Materials	Construction	Completed		
0	33	20	15	43	19		130

## Potential Challenges:

- Q1 Weather negatively impacting construction progress
- Critical permits still needed for projects

Klamath National Forest  
Shasta Trinity National Forest  
CalTrans  
California Water Resources Board

- Material not yet received for all 2023 construction



**MATERIALS / SUPPLY CHAIN RISK**

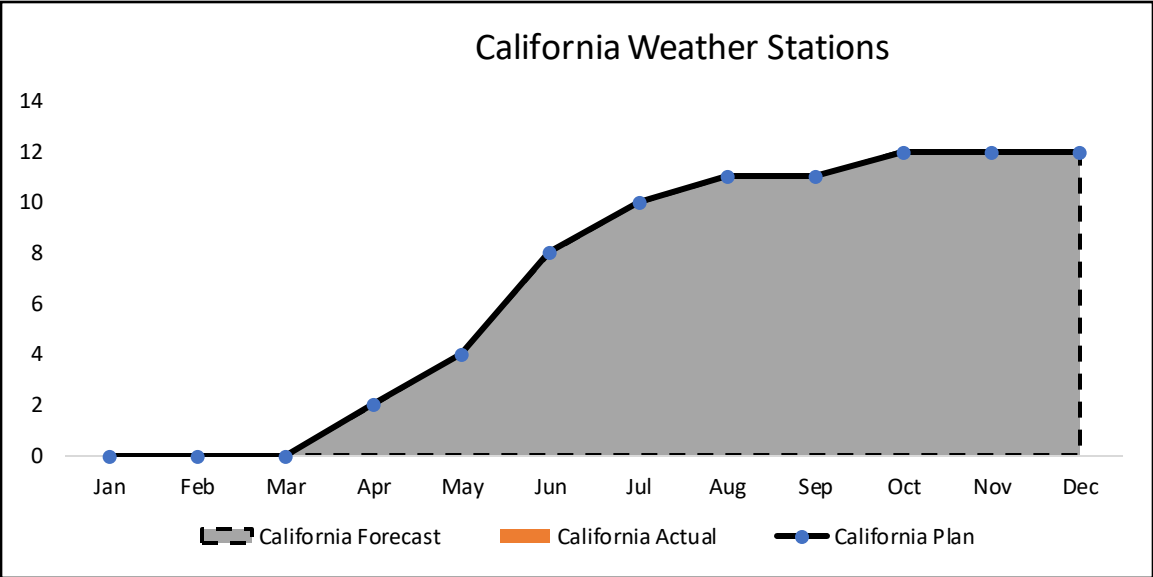
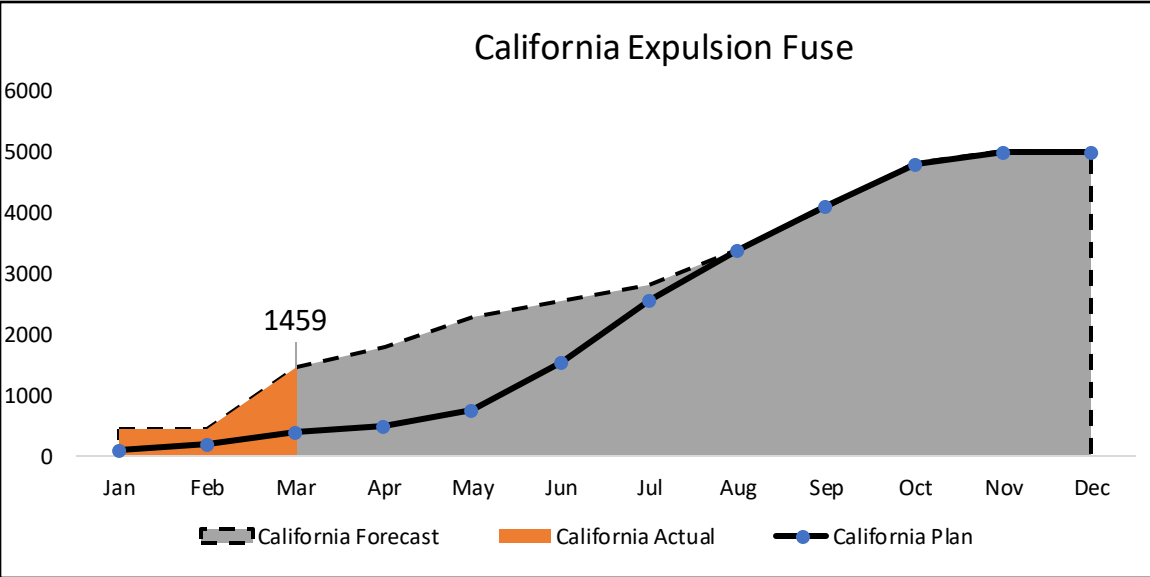
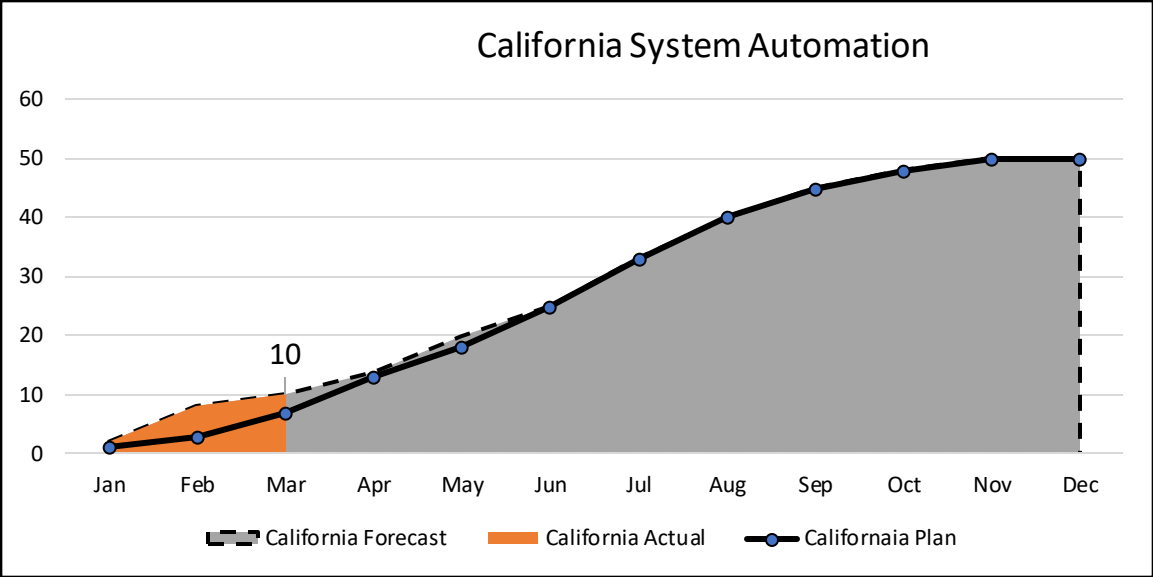
	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
Plan	16	25	44	64	84	104	124	130	130	130	130	130
Actual	38	63	63									
Forecast				70	90	110	124	130	130	130	130	130



# System Automation, Weather Stations and Expulsion Fuse Replacements

Status as of: March 31, 2023

- Programs are currently on track to meet 2023 plan targets
- Updates to be provided monthly
- Weather is currently limiting progress on these initiatives



A man in a blue shirt is seen from the side, working at a computer workstation. He is looking at several monitors displaying various data visualizations, including line graphs and tables. The background shows server racks. The text "Elevated Fire Risk Settings (EFR)" is overlaid on the image.

# Elevated Fire Risk Settings (EFR)

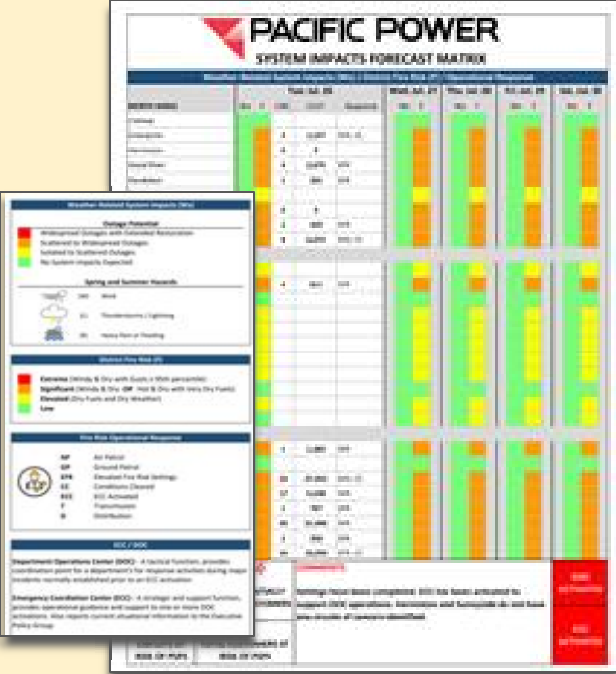


# Elevated Fire Risk (EFR) Settings

- 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



## Outreach & Awareness

Press Release, July 24, 2022

PORTLAND - With daily high temperatures forecast to near or above the 100-degree mark next week across parts of the Pacific Northwest, Pacific Power is prepared to face higher demands on the grid from both record temperatures and increased customer need.

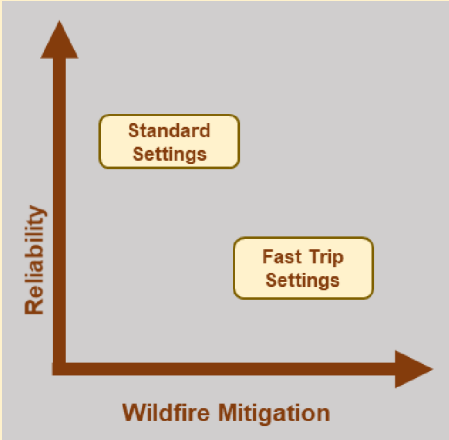
"We've taken steps for grid hardening, in particular since last summer, to prevent overloading at the substation level and on the distribution system," said Erik Brookhouse, vice president of system operations for Pacific Power. "We are confident about our network's readiness for this summer."

Wildfire conditions have elevated too and Pacific Power has taken additional safety precautions in high risk areas to reduce the risk of wildfire. Among other measures, the company is conducting additional patrols of power lines and temporarily modifying targeted system settings to be more sensitive.

- Operate the clothes dryer and dishwasher at night.
  - If you have air conditioning, set it to maintain an interior temperature of 78 degrees, higher when you are away from home.
- More electric energy information is available on Pacific Power's website at: [www.pacificpower.net](http://www.pacificpower.net).

## 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



# Next Steps

- Questions
- Suggestions for meeting topics
- Next meeting: November 16, 2023, at 10:00 a.m.



# Thank you!

Contact: Nora Yotsov | [Eleonore.Yotsov@PacifiCorp.com](mailto:Eleonore.Yotsov@PacifiCorp.com) | 503-813-5253