

# 2021 Small Multi-Jurisdictional Utilities (SMJUs) Public Safety Power Shutoffs (PSPS) Preparedness Staff Briefing #1

Bear Valley | Liberty | PacifiCorp

June 8, 2021



California Public  
Utilities Commission

# Agenda

1:00 – 1:10 p.m. Introduction

*Shelby Chase, California Public Utilities Commission*

1:10 – 1:45 p.m. Bear Valley Presentation

*Paul Marconi, Sean Matlock, Bear Valley Electric Service Inc.*

1:45 – 2:20 p.m. Liberty Presentation

*Eliot Jones, Liberty Utilities (CalPeco Electric) LLC*

2:20 – 2:55 p.m. PacifiCorp Presentation

*Allen Berreth, PacifiCorp d/b/a Pacific Power*

2:55 – 3:00 p.m. Closing Remarks

# Housekeeping

- Attendees are muted.
- Briefing is being recorded.
- 1<sup>st</sup> briefing – presentations only.
- 2<sup>nd</sup> briefing – follow up questions and topics.
- Survey form – please return after briefing.

# Objectives



Actions to prepare for the 2021 fire/PSPS season



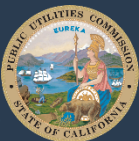
Lessons learned from 2020



Areas of concern

# Bear Valley Electric Service

Paul Marconi, Director, Treasurer and Secretary  
Sean Matlock, Energy Resource Manager



California Public  
Utilities Commission










# 2021 PSPS Preparedness Briefing for California Public Utilities Commission



*June 8, 2021*



-  **Overall Preparedness**
-  **Decision-making Criteria**
-  **Exercises**
-  **Community Resource Centers**
-  **Website Capabilities**
-  **Notifications**
-  **Preparedness Coordination**



*Powering The Mountain Since 1929*



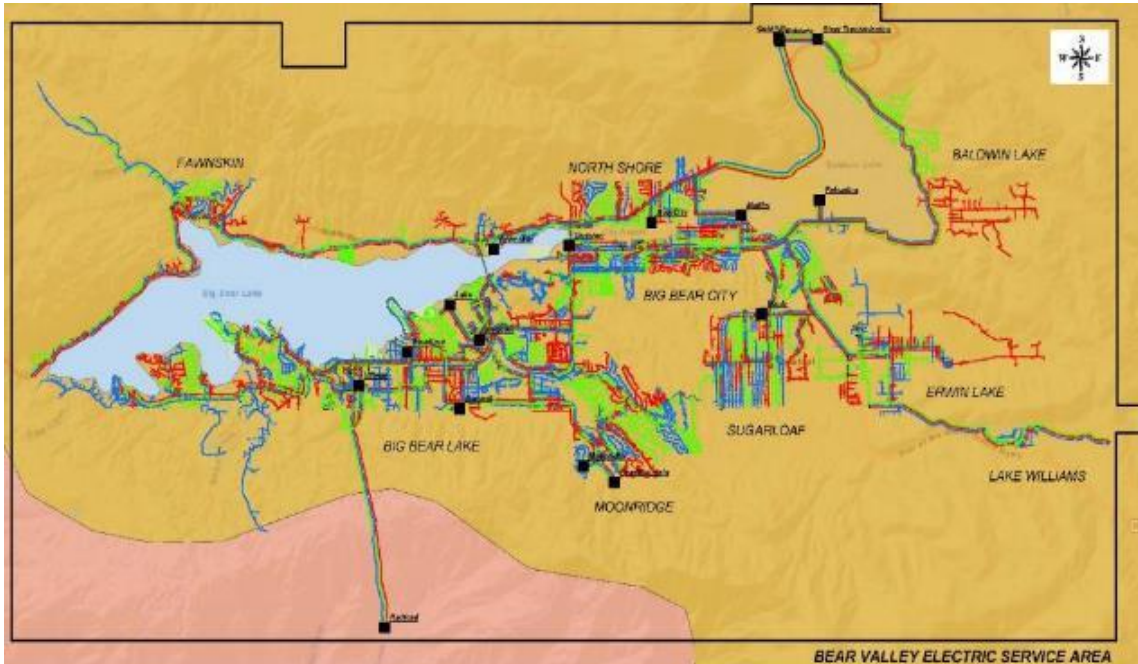
# Overview



*Powering The Mountain Since 1929*



# Overview



**Location:** 32 square miles of rural and mountainous terrain at approximately 7,000 ft. in San Bernardino Mountains (80 miles East of Los Angeles). Heavy tree and vegetation density and mostly dry environment (80.5%)

**Key jurisdictions:** County of San Bernardino, City of Big Bear Lake, US Forest Service

**Customers:** 24,604 total [23,091 residential and 1,513 commercial] CARE: 2,003; Medical Device: 234; AFN: 14

- **Accident/Injury free: 742 days.**
- **No employee contact with High Voltage systems in over 5 years.**
- **No ignitions in over 10 years.**
- **No COVID-19 workplace outbreaks.**

**June 3, 2021**

# Overview Cont.

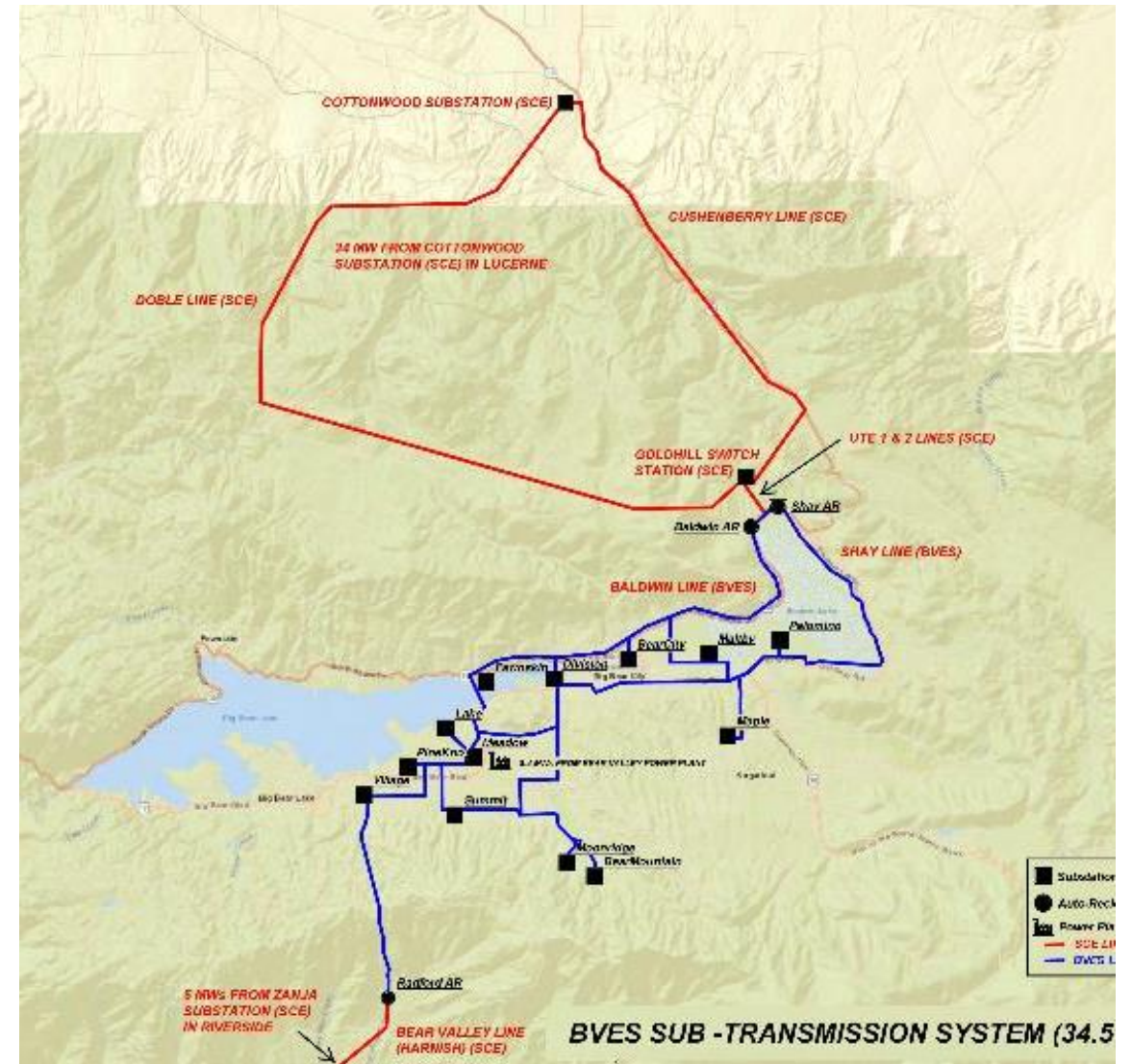
- **Electrical System:**

- *Sub-transmission (34.5 kV)*
  - 24.8 circuit miles bare overhead conductor
  - 4.2 circuit miles covered overhead conductor
  - 0.9 circuit miles underground
- *Distribution (4 kV)*
  - 178.5 circuit miles bare overhead conductor
  - 3.5 circuit miles covered overhead conductor
  - 53.2 circuit miles underground
- Substations: 13
- Bear Valley Power Plant: 8.4 MW
- 446 NEM customers: 3.39 MW
- 21 DG customers: 0.13 MW
- Supply Lines: 39 MW total
- Load delivered (2020): 133,269 MWh (33% RPS)
- Load is winter & evening peaking
  - Historical peak: 47 MW (2018)



# Power Supplies

- BVES system is located entirely within the balancing area under the control of the California Independent System Operator (CAISO).
- Supply lines to BVES are owned and operated by Southern California Edison.
- BVES procures power via mix of Power Purchase Agreements
- Annual base load
- Hourly shaped product
- Seasonal load
- Monthly variable product (November to February)
- Transmission fee to SCE



# Grid Hardening

## Microgrids, Resiliency zones, and Temporary generation:

Critical infrastructure already has backup generation and is outside PSPS high risk areas.

BVES in process of developing a small utility scale solar-battery project.

Solar: 5 MW AC single-axis tracker solar generation facility.

Battery: 4 MW/16 MWh (four-hour) Lithium-Ion NMC BESS.

## Mitigation Measures to reduce need and/or impact of PSPS:

34.5 kV Supply Line re-closers have all been changed out to Pulse Conditioned IntelliRupters. (Completed in 2019)

PSPS high risk areas sectionalized from rest of BVES system. (Completed in 2019)

Covered conductor project in progress. Installed 7.7 circuit miles in 2020. Installed 1.4 circuit miles to date in 2021 of 12.9 circuit miles planned.

Eliminated all expulsion fuses from system.



# Major Projects

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- **Covered Wire Program (WMP):** Replaces bare wire with covered wire (4.3 circuit miles on 34 kV & 8.6 circuit miles 4 kV per year).
- **Fuse Replacement Program (WMP):** Replaces 3,204 conventional fuses with 628 electronic fuses and 2,576 current limiting fuses.
- **Enhanced Vegetation Management:** Invokes higher clearance standards, addresses fast growing species, and reduces overstrike risk.
- **Evacuation Route Hardening Program (WMP):** Installs wire mesh wrap on 812 poles.
- **Weather Stations/HD Alert Cameras (WMP):** Installs 20 weather stations and HD Alert cameras at 5 key spots.
- **Radford Line Replacement Project (WMP):** Replaces 34 kV line & poles with covered wire & fire resistant poles in HFTD Tier 3 area.



# Major Projects

- **Pole Loading Assessment & Remediation Program (GRC):** Assess approximately 8,000 poles and replaces/remediates deficient poles.
- **Tree Attachment Removal Program (GRC):** Removes approximately 1,200 tree attachments. Cost: \$3.4 million over five years.
- **Palomino Substation Upgrade Project(GRC):** Completely replaces substation.
- **Grid Automation Project (AL):** Installs fiber network in service area, implements SCADA software and automates substations and field switches.
- **FLISR Project (GRC):** Installs 9 Fault Localization Isolation System Restoration devices on 34 kV system.
- **Power Plant Upgrade Project (GRC):** Upgrades engine controls & catalyst and performs mechanical overhaul.
- **Solar Generation & Battery Storage Project (Planning):** 4-5 MWs generation with 4 MW/12 MWh battery.





# Decision-making Criteria & Modeling

Criteria based on system design limits, system condition, fuel availability, and likelihood of wildfire spread.

BVES would invoke PSPS if actual sustained wind or 3-second wind gusts exceed 55 mph and conditions are High for wildfire threat.

PSPS is measure of last resort in a progression of operational actions.

BVES did not have any PSPS events in 2019.

Based on analysis of weather in last 5 years BVES has not met criteria to invoke PSPS.

**Highest Daily Wind Gust on High Risk Days**

Wind Gusts	2015	2016	2017	2018	2019
>55	0	0	0	0	0
50 to 54	0	0	0	0	0
40 to 49	1	0	0	0	1
30 to 39	7	7	5	6	1
20 to 29	43	78	39	64	27
<20	56	66	74	59	58

BVES is in the process of developing ignition probability models to better understand localized wildfire risk. Expect models to be operational by the end of 2021.

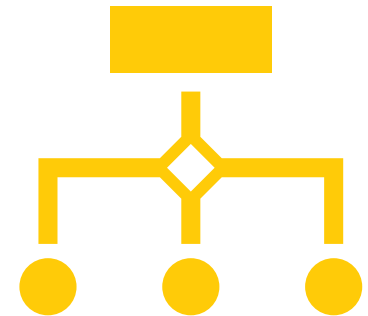
# Exercises

## **Last exercise was conducted on June 26, 2021:**

- Several lessons learned which resulted in updating BVES PSPS Policy and Procedure Plan

## **Next exercise planned for June XX, 2021:**

- Scenario will be a BVES directed PSPS event due to high winds and high wildfire threat conditions.
- Will set up Community Resource Center.
- Will deploy Wildfire Response Team.
- Will conduct re-energization patrols.
- Will exercise all levels of communications with local government, agencies, stakeholders, and the public.
- Will encourage local government, agencies and stakeholders to participate.
- Due to COVID-19, expectation non-field activities to be conducted via web-based system.



# Community Resource Center

## Planned locations and number of standing contracts

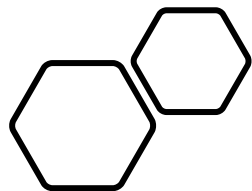
BVES has one onsite outdoor CRC.

## Services provided at each type

Water | Chairs | PSPS information  
Representatives | Restrooms | Small first aid kits  
Nonperishable Food | EZ up tents for shade  
Generators for power

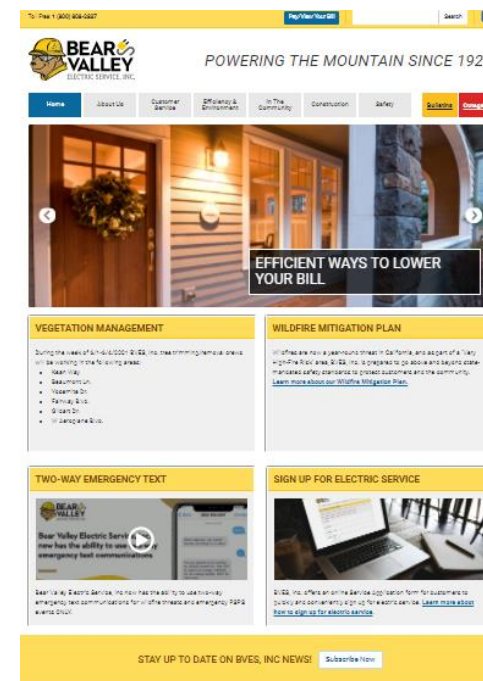
## Changes to plans based on state opening on 15 Jun

BVES will evaluate current state and local public health guidance and ensure compliance. If “safer at home” is in place, BVES would strive to establish mobile CRC(s) and send them to neighborhoods on rotating basis. If social distancing is in place, BVES would implement social distancing at the CRC(s).



# Website

- Capacity
- Confidential information sharing



# Website Capacity

## Standards and Compliance

- SSAE118, SOC1, SOC2, SOC3
- PCI DSS
- ISO27001
- ISO14001
- ISO9001



## Security

- Manned and secured 24x7x365
- Biometric scanners
- Keycard access required
- Video surveillance
- Alarm system

## Backups

- Weekly full backups, 2 week retention, offsite
- Daily differential backups

## Network

- Tier-1
- 10-Gigabit
- Redundant routers
- Redundant LAN
- 14 carriers providing redundant fiber connectivity

## Power

- N+2 redundancy
- Redundant diesel generators
- 50,000 gallon fuel tanks

# Website Data Collection

**From CCPA's Personal Information categories, we collect the following:**

- **Identifiers:** name, address, email, phone, or other information we may use to contact you.
- **Internet Activity:** when you connect to our website we sometimes collect information such as your IP address, browser type and version, operating systems and platform, Uniform Resource Locators (URLs), page response times, download errors, length of visits to certain pages, page interaction information, and methods used to browse away from the page or other information about your internet connection and the equipment you use to access our website.

**These are collected for the following purposes:**

- To present our website and its contents to you
- To provide information or services (if any) that you request from us and to use or disclose the information for any purpose related to the provision of such information or services;
- To fulfill the purposes for which you provided the information or that were described when it was collected;
- For any other purpose with your consent

**We do not collect** Other Data, Protected Classes, Commercial Information, Biometric Information, Professional Data, Education Information, Geolocation Data, or Sensory Data from or about our clients.



# Customer Notifications



Customer feedback from 2020 on delivery, cadence, content, etc.

Modifications to processes based on 2020 lessons learned  
BVES did not have any PSPS events in 2020 (or ever)

# Preparedness Coordination



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# Preparedness coordination with critical facilities and infrastructure

- Meetings held and feedback
- Notification channels, plans, POCs identified, tested
- Resiliency
- BVES has met with stakeholder to determine the type of coordination desired and has included these in its PSPS communications plan.



# Preparedness coordination with local/tribal/county emergency response

- Meetings held and feedback
- Annual PSPS meetings are held for stakeholders.
- Notification channels, plans, POCs identified, processes tested
- Outreach and coordination with local government and fire community stakeholders will incorporate pandemic PSPS planning
- BVES intends to work closely with communications providers and other state agencies to ensure they have the most up to date information as early as possible to allow them to take applicable appropriate action.
- IOU liaison representative plans for involvement at counties and tribes EOCs
- How will IOU ensure that all EOC liaisons are disseminating consistent and accurate information?





## How preparedness will be affected as stay at home orders are likely to go county-by-county on June 15?

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- BVES will evaluate current state and local public health guidance and ensure compliance. If “safer at home” is in place, BVES would strive to establish a mobile CRC and dispatch it to neighborhoods on a rotating/as needed basis. Also, BVES would utilize rolling blackouts in the case of a SCE supply driven PSPS event (e.g., partial loss of supplies). If social distancing is in place, BVES would implement social distancing at the CRC(s).



# Medical Baseline

## Backup power programs (Include planned vs actual data).

BVES currently only has backup generation at its CRC.

## Milestones through September 2021

To add approximately six battery backup generators to be dispatched on an as needed basis.

## How is Medical Baseline program being communicated and expanded to maximize participation?

BVES advertises our Medical Baseline program frequently through our social media outlets

Added a Medical Baseline application to our website

Send annual reminders when customers need to requalify for the Medical Baseline program.

BVES did not remove any customers from the Medical Baseline program during COVID.



# Mobile home parks

## **Identification and number of customers behind each master meter.**

- BVES has a total of 262 customers that are master metered, of the 262 customers 95 are on our CARE program.

## **Notification plans for customers behind master meters. Has this been tested?**

- BVES has a list of contacts for each mobile home park manager, as well as a list and contact information of any customers that are behind the meter that are on our Medical Baseline program of AFN. BVES has the ability contact customers by IVR (interactive Voice Response) call, Text messages, Door hangers. All of these have been successfully tested.

# Communications Carriers

- Notification channels, plans for outages, POCs identified, backup systems tested?
- Looking forward, BVES has taken the following action:
  - Working with the County and City to develop a shared list of access and functional needs persons.
  - Distributing critical customer list to BVES operations bi-weekly.
  - Updating critical care/medical baseline customer's email addresses.
  - Text messaging software which includes two-way texting.
  - Mailing a postcard in multiple languages with details of BVES's WMP and PSPS plans.
- Making information readily available via:
  - BVES's Facebook
  - [www.BVESInc.com](http://www.BVESInc.com)
  - Radio
  - Local News Outlets
  - Interactive Voice Response (IVR) system, as needed
  - Conducting annual community meeting addressing PSPS policies and procedures.



# AFN Specific Needs

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- Medically vulnerable customer support beyond Medical Baseline customers
  - BVES has a list and contact information of any customers that are behind the meter that are on our Medical Baseline program of AFN. BVES has the ability contact customers by IVR (interactive Voice Response) call, Text messages, Door hangers.
- Coordination with CBOs
  - BVES currently does not have any CBOs



# Areas of Risk or Concern for PSPS Preparedness

- Southern California Edison (SCE) invoked PSPS event with little or warning. Actions taken to mitigate risk:
  - Conducted four meetings with SCE.
  - Key staff trained on SCE PSPS process and terminology.
  - Established direct lines of communications and protocols.
  - Active participant in periodic SCE PSPS Working Group - Inland Empire & Northern Region (CalOES Region VI).
  - Developed internal procedures for partial or complete loss of SCE supplies.



## Our Values

In pursuing our mission, the board of directors, management and the company's employees are guided by the shared Values presented below:

**Integrity** - Building trust through honest communications and doing what is right

**Teamwork** - Maximizing efficiency through collaboration and individual strengths

**Respect** - Valuing diversity and treating all stakeholders with fairness

**Excellence in Service** - Striving for excellence and quality in everything we do

**Accountability** - Taking ownership of one's actions

# Questions?

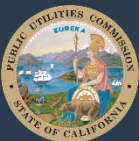


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# Liberty Utilities

Eliot Jones, Senior Manager, Wildfire Prevention



California Public  
Utilities Commission





# **Public Safety Power Shutoff Preparations Brief**

**Presented to the California Public Utilities Commission  
(CPUC)  
June 8, 2021**



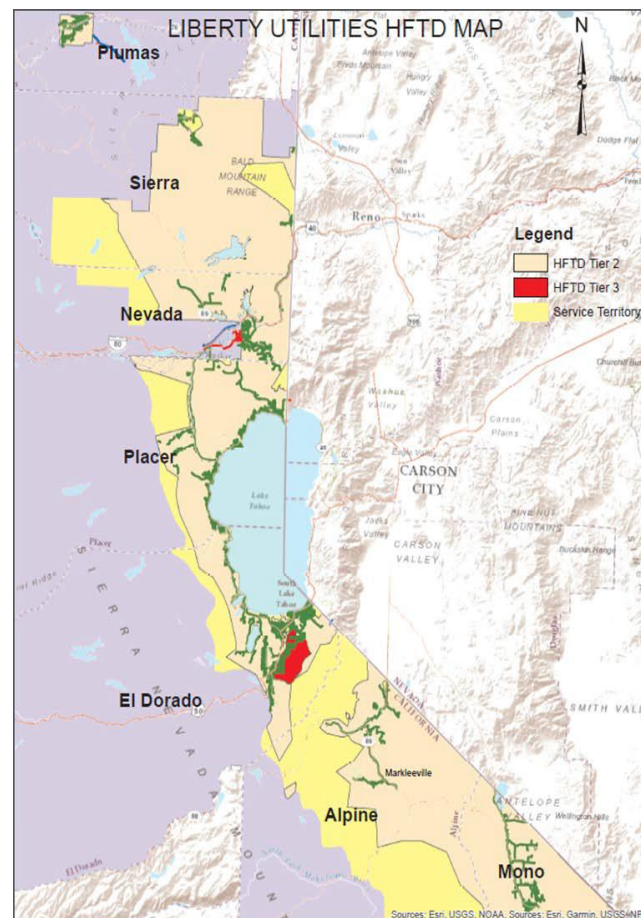
# Liberty Service Territory

Liberty serves approximately 50,000 electric customers in California in and around the Lake Tahoe Basin. The service territory is geographically compact and generally encompasses the western portions of 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 service territory extends from Portola in the north to Markleeville and Topaz Lake in the south.





# Overall Preparedness

## Grid Hardening

- How mitigation measures will reduce the need for PSPS over time
- Covered Conductor
- Microgrids
- Resilience Corridors
- Distribution Automation



# Overall Preparedness

## Covered Conductor

- Completed first covered conductor projects in 2020
- Plan to use risk mapping and modeling to drive future covered conductor and other grid hardening initiatives
- Utilize covered conductor to create resiliency corridors







# Overall Preparedness

## Microgrids

- Commissioned and constructed an innovative microgrid solution for a remote mountain research station.
- Saved customers over \$2 million by replacing a high fire-risk distribution line with a containerized solar plus battery storage microgrid.
- Undergoing multiple feasibility studies for microgrids in other locations.







# Overall Preparedness

## Distribution Automation

- Targets design of distribution automation system in 2021
- Targets feeders in very high fire risk areas
- Increases sectionalizing options for reduced scope of PSPS events
- Leverages existing and new field equipment, improves reliability

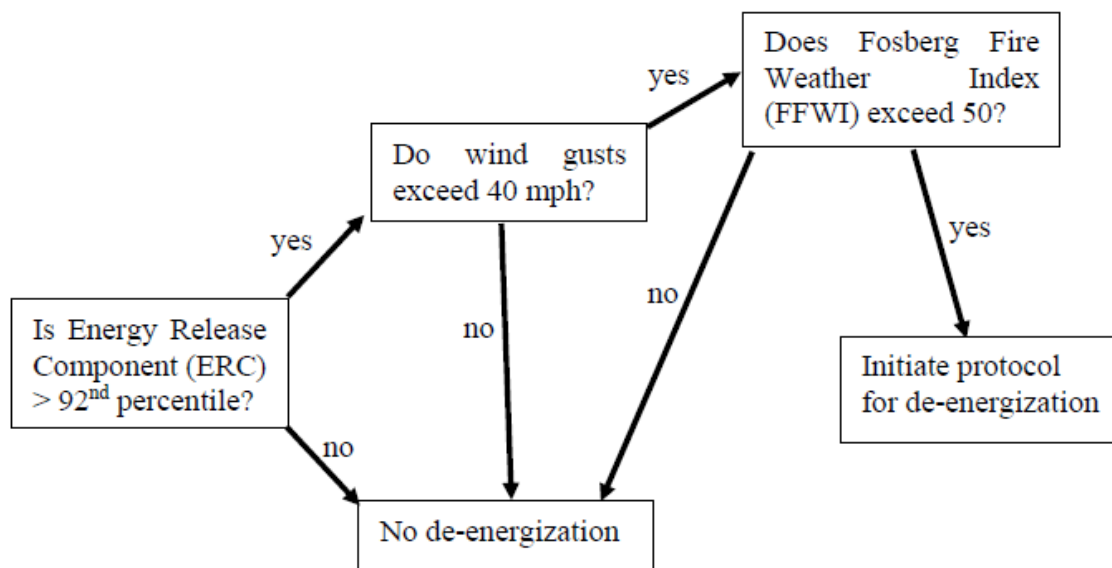




# Decision-making Criteria and Modeling

Liberty defined de-energization thresholds based upon weather factors known to cause extreme fire risk conditions. The decision tree establishes key thresholds for determining PSPS.

De-energization Thresholds for Prevention of Catastrophic Wildfires

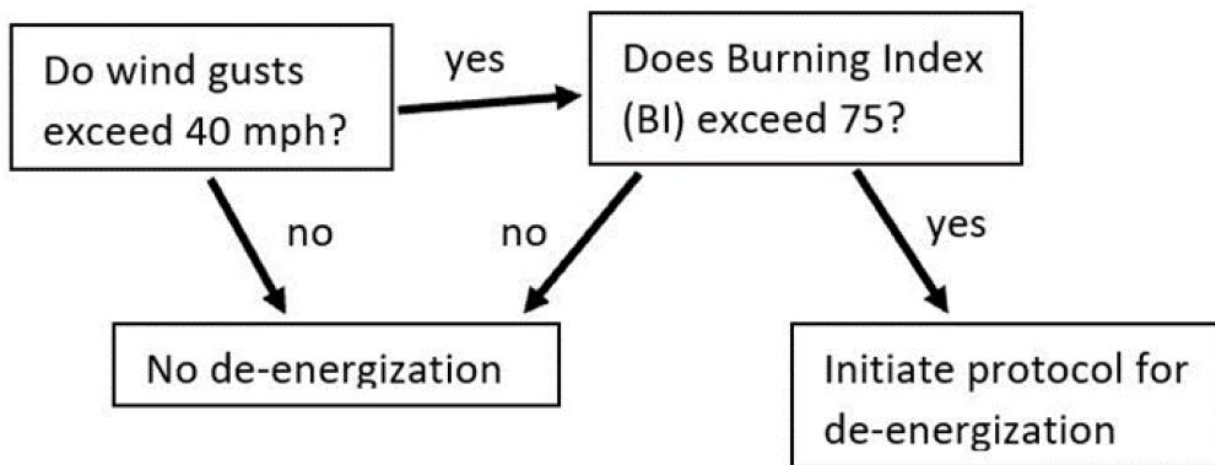




# Decision-making Criteria and Modeling

Liberty is in the process of testing additional decision-making criteria for PSPS modeling.

**De-energization Decision Tree that Liberty is Evaluating in 2021.**





# Overall Preparedness

## Exercises

- May 25, 2021: Virtual tabletop PSPS exercise conducted.
- June 25, 2021: Virtual full-scale PSPS exercise scheduled

CONCEPT: Test core capabilities of intelligence and information sharing, operational communications, and operational coordination/incident command.

### GOALS:

- (1) Test Liberty PSPS Operations and Communications Playbooks and how they sync with the Incident Command System (ICS).
- (2) Test implementation of ICS in response to a PSPS scenario.
- (3) Test procedures for de-energization and re-energization in response to PSPS conditions.

DESIRED OUTCOMES: Full implementation, training, and testing of Liberty PSPS Playbooks and Incident Command System.



# Overall Preparedness

## Exercises

### 2021 Exercise Lessons Learned to Date:

- Internally reassigned responsibility for organization of State Executive Briefings from IC/Admin Officer to Liaison Officer.
- Added C-Suite notifications for each PSPS stage.
- Need to practice online notifications of Cal OES and phone call to California State Warning Center.
- Need to cross-train personnel for each Incident Command Position.
- Need to include simulated calls to Customer Service in Exercise.





## Narrower Focus

### Community Resource Centers (CRCs)

- Planned CRC locations include the following: Walker, Meyers, South Lake Tahoe, North Lake Tahoe, and Portola, California.
- Sites are indoor venues and meet requirements for customers to travel fewer than 30 miles to a CRC. CRC locations meet ADA requirements, accommodate AFN populations, and comply with fire codes.
- Mass Care Emergency Assistance Pandemic Planning Considerations were used, so CRCs have adequate space for estimated occupancy and comply with social distancing and public health protocols. Capacity and distancing requirements will be adjusted as COVID-19 guidelines change.
- Services provided will include water, snacks, charging devices, ADA-compliant restrooms, chairs, and PSPS information updates from Liberty subject matter experts.



# Overall Preparedness

## Website

### Capacity

- Liberty's website is hosted on Amazon Web Services (AWS) so the microsite will have no limit.

### Confidential information sharing



# Overall Preparedness

## Notifications

- Customer feedback from 2020 on delivery, cadence, and content.
- Modifications to processes based on 2020 lessons learned.



# Overall Preparedness

## Preparedness Coordination With Critical Facilities and Infrastructure

Meetings with critical facilities and infrastructure include:

- April 23, 2021: Fire Coordination Meeting with NVE
- May 18, 2021: Potential PSPS/PSOM Meeting
- May 21, 2021: Liberty/NVE CRC/PSPS Coordination
- May 25, 2021: PSPS Tabletop Exercise
- May 26, 2021: Placer East Slope Fall Seasonal Outlook Briefing
- May 28, 2021: Town of Truckee PSPS/PSOM Utility and EM Meeting

Notification channels, plans, POCs have been identified and tested.



# Overall Preparedness

## Resiliency

- Behind the Meter (BTM) Customer Program and Customer Demonstration Project. BTM battery storage program is offered to three customer classes. Customer pays a monthly fee for resiliency, and the remaining would be subsidized by Liberty.
  1. Medical Baseline—mostly subsidized by Liberty
  2. Critical Facilities—Hospitals, fire, police and eventually groceries and gas stations--middle subsidized by Liberty.
  3. Customers—minimal subsidy by liberty.
- Kings Beach diesel assets (12 MW) provide backup power for underground circuit to increase community resiliency.

## Resiliency Corridor Utility Program

- Based on likelihood of future PSPS outages and duration of outages.
- Will evaluate areas for resiliency corridors similar to Kings Beach.
- Will include storage, hardening, and generation.





# Overall Preparedness

## Medical Baseline

How Medical Baseline Program is being communicated and expanded to maximize participation

- Increased outreach via social, email, and bill inserts.
- BTM project.

## Mobile Home Parks

Identification and number of customers behind each master meter

- New individual meters have been installed.
- Mobile customers now on Everbridge for individual notifications.

Notification plans for customers



# Overall Preparedness

## Communications Carriers

- Notification channels, plans for outages, POCs identified, backup systems tested.
- Communication carrier POCs have been identified.
- POCs are included in PSPS exercise, and in periodic Wildfire Safety Community Advisory Board Meetings.



# Overall Preparedness

## AFN Specific Needs

Medically vulnerable customer support beyond medical baseline customers and coordination with CBOs.

Liberty has worked to further identify AFN populations and encourages customers to register with special assistance/notification needs. The following channels will assist in the buildout:

- Community Meetings – host community meetings with Public Safety Partners and AFN advocacy groups.
- Toolkit – distribute PSPS educational pamphlets, flyers, and checklists in accessible formats.
- Website – publish and maintain PSPS web copy outlining Liberty’s determination and notification process and detailing ways for customers to prepare.
- Social Media – post content to Facebook and Twitter notifying customers of Liberty’s PSPS determination and notification process.



# Overall Preparedness

## AFN Specific Needs

- Customer Email – distribute email notifying customers of Liberty's PSPS determination and notification process.
- Bill Insert/Mail – distribute bill insert/mailer notifying customers of Liberty's PSPS determination and notification process.



# Overall Preparedness

## Areas of Concern for PSPS Preparedness

- Low snowpack and extremely dry conditions may result in a fire danger that is higher than normal.
- Limited experience with actual PSPS events.
- NV Energy potential Public Safety Outage Management (PSOM) could have impacts on Liberty customers.



# Thank you



# PacifiCorp d/b/a Pacific Power

Allen Berreth, Vice President of Transmission and Distribution Operations



California Public  
Utilities Commission

# PacifiCorp 2021 Public Safety Power Shutoff (PSPS) Briefing #1

June 8, 2021



# Introduction

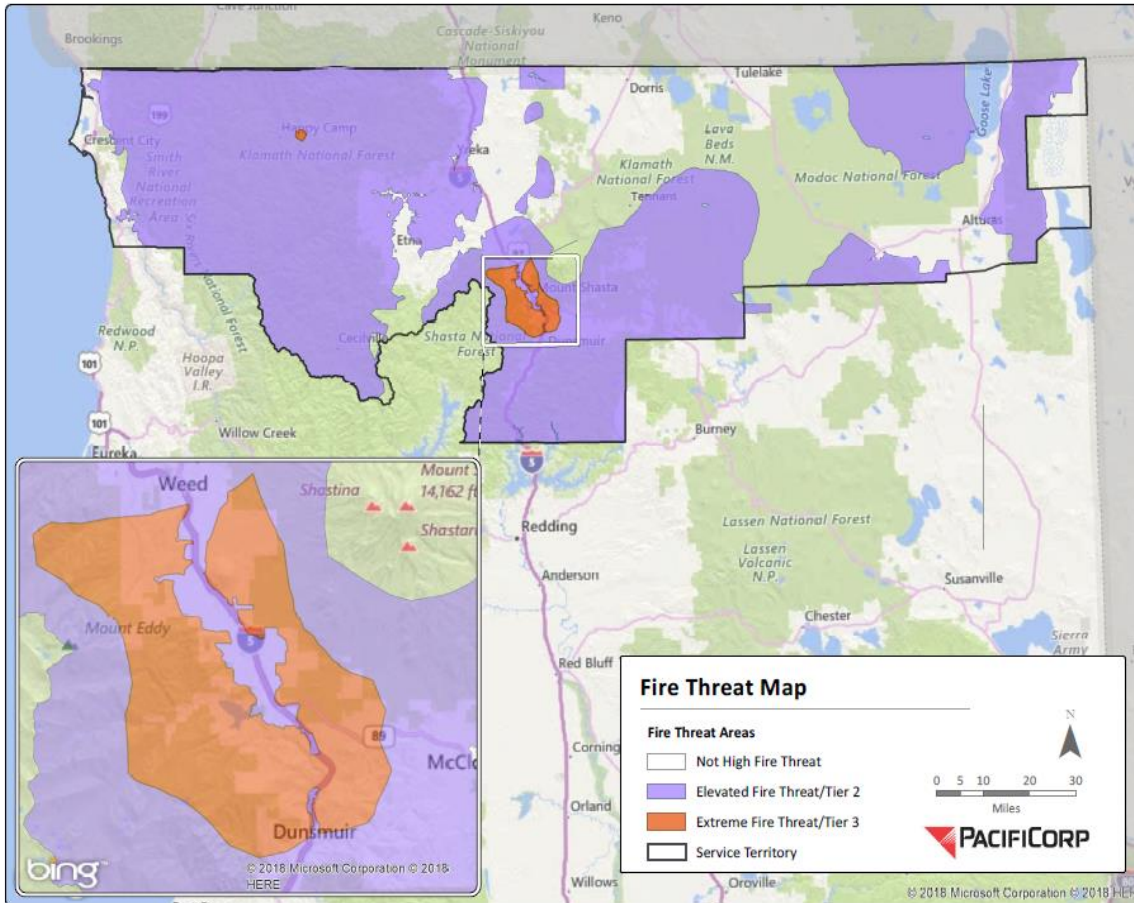
**Presenter:** Allen Berreth, VP of T&D Operations

## Topics:

- PacifiCorp's CA Service Territory
  - PSPS Zone Review
- Overall Preparedness
  - Grid Hardening
  - Evolution of Decision Making
  - Tabletop Exercises & CRC's
  - Customer Feedback, Notifications, & Website Status
  - External Coordination
  - Preparedness Impact of Stay-at-Home Orders
- Narrow Focus Areas
  - Medical Baseline & AFN Customers
    - Community Resiliency – Back Up Generation
  - Master Metered Accounts
  - Communication Carriers
- PSPS Preparedness Opportunities



# PacifiCorp's California Service Territory



## General Stats

PacifiCorp provides electricity to approximately **45,000 customers** via **63 substations**, **2,520 miles** of distribution lines, and about **800 miles** of transmission lines across nearly **11,000 square miles** of which just under half is classified as **HFTD**

## HFTD Stats

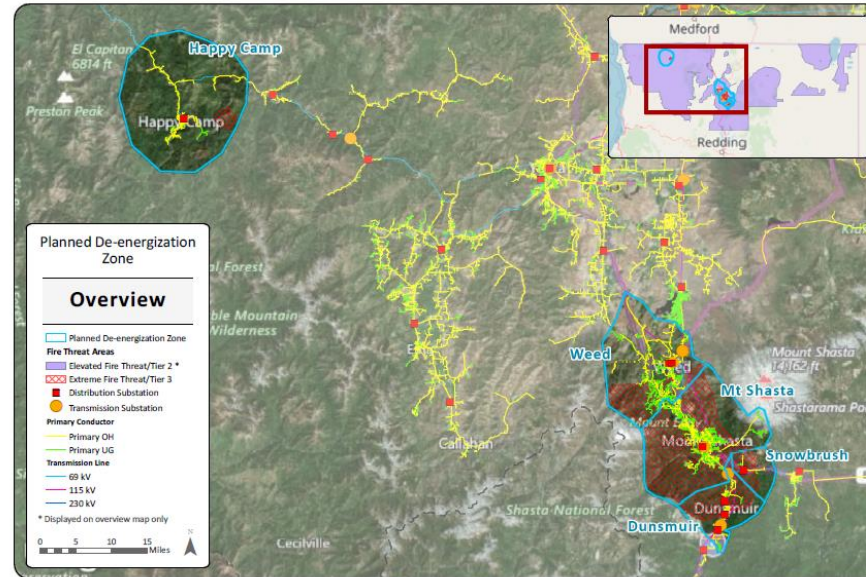
Approximately **1,200 miles** or **36%** of all overhead lines are located within the HFTD

**850 miles** of overhead distribution lines  
**350 miles** of transmission lines in the HFTD



# PacifiCorp's CA PSPS Zone Summary

- PacifiCorp has identified two extreme risk geographic locations generally centered around Tier 3
- These locations are subdivided into 5 discrete zones
- Approximate impact:
  - 20 circuits
  - 9 substations
  - 259 line-miles
  - 10,351 customers
- PSPS Zones reflect extreme risk locations and serve as a starting point
- Real time monitoring during fire season may result in PSPS activation in non-PSPS zones



	PSPS Name	Substation	# of Circuits	Customers	Distribution OH	Distribution UG
1	Happy Camp	Seiad, Happy Camp	3	865	48.4	5.9
2	Weed	Weed, International Paper	5	2,589	90.5	62.1
3	Mt. Shasta	Mt. Shasta	6	5,074	86.4	76.7
4	Dunsmuir	N & S Dunsmuir, Nutglade	5	1,806	30.0	8.6
5	Snowbrush	Snowbrush	1	17	4.2	1.2
	<b>Total</b>	<b>9 Substations</b>	<b>20</b>	<b>10,351</b>	<b>259.5</b>	<b>154.5</b>



# Overall Preparedness

PSPS Preparedness Includes a Variety of Interrelated Components and Tasks:

Grid Hardening & Asset Inspections	Decision Making Criteria & Activation	PSPS Protocols and Readiness	Customer Notifications	External Coordination
<ul style="list-style-type: none"><li>✓ Installation of Covered Conductor</li><li>✓ Replacement of Small Diameter Conductor</li><li>✓ Installation of System Automation Equipment</li><li>✓ Wood Pole Replacement / Reinforcement</li><li>✓ Asset Inspections</li></ul>	<ul style="list-style-type: none"><li>✓ Situational Awareness Capability and Growth</li><li>✓ PSPS Threshold Evaluation</li><li>✓ Decision Making Protocols</li></ul>	<ul style="list-style-type: none"><li>✓ Tabletop Exercises</li><li>✓ CRC Readiness and Capability</li></ul>	<ul style="list-style-type: none"><li>✓ Incorporation of Customer Survey Results</li><li>✓ Customer Notifications</li><li>✓ Medical Baseline and AFN Customer Outreach</li><li>✓ Website Readiness</li></ul>	<ul style="list-style-type: none"><li>✓ Coordination with Critical Facilities</li><li>✓ Dynamic Planning and Coordination with Emergency Response Partners</li><li>✓ Coordination and outreach to Tribal Communities</li></ul>



# Grid Hardening & Asset Inspections

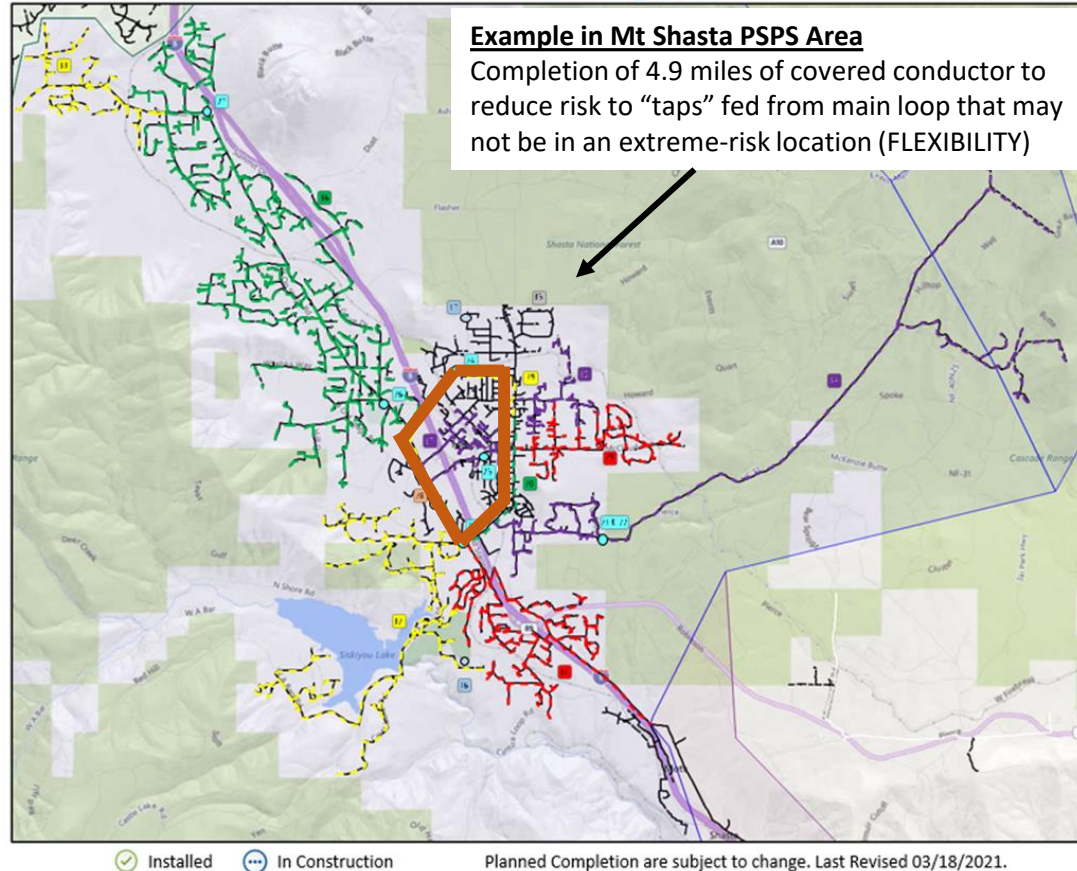
## Grid Hardening and Asset Management Programs are Key Components of PSPS Mitigation

### Grid Hardening

- ✓ Installation of covered conductor
  - Total Program Target: 221 line-miles
  - 2021 Program Target: 85.2 line-miles
- ✓ Replacement or reinforcement of wood poles
  - Total Program Target: 4,326 poles
  - 2021 Program Target: 128 poles
- ✓ Installation of System Automation Equipment
  - 2021 Target – 27 devices
  - Program Target – 68 devices
- ✓ Replacement of small diameter conductor
  - Total Program Targets: 53 line-miles (begins in 2022)
  - 2021 Program Target: 0 line-miles (begins in 2022)

### Asset Inspections

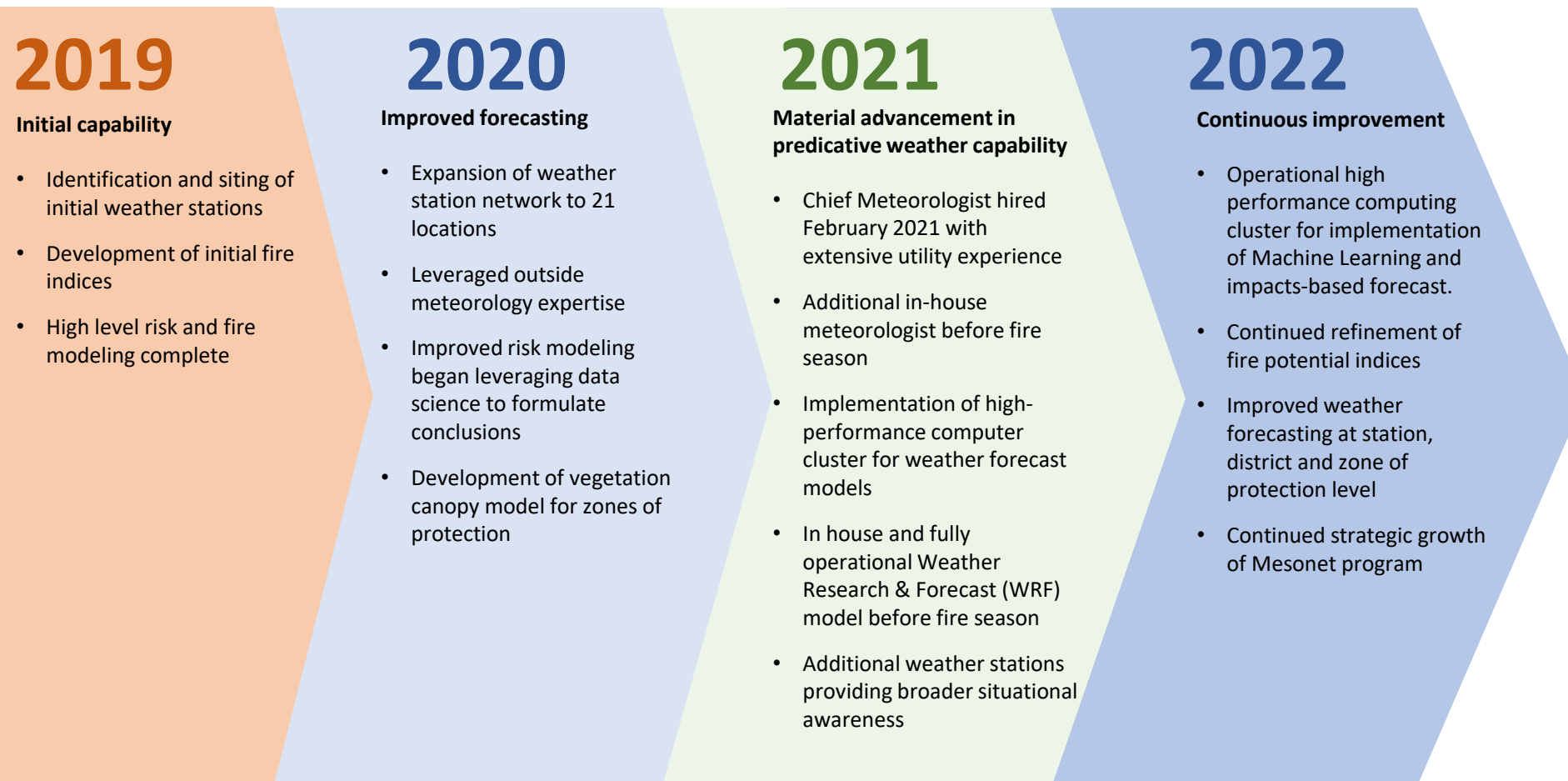
- ✓ Complete Tier 2/3 Inspections prior to Fire Season
- ✓ Identify fire threat conditions and accelerate correction
- ✓ Refreshed focus on QA/QC of Inspections:
  - Incorporate fire risk identification into annual inspector training
  - Prioritization of higher risk (Tier 2/3) locations first
  - Complete desktop review on 50% of planned detail/intrusive inspections (~6,500)
  - Field audit at least 5% (680) of planned detailed inspections
- ✓ Infrared Inspections Planned on Approximately 700 line-miles of overhead transmission in 2021



*Direct Impact to Risk Anticipated to Begin in 2022 Fire Season*

# PSPS Evolution and Growth

*PacifiCorp is committed to further improve its predictive weather and PSPS forecasting capability*



# PSPS Decision Making

- PacifiCorp uses a range on inputs in its assessment and decision-making process:

- ✓ Weather Forecasting & Risk
- ✓ Numeric Weather Thresholds
- ✓ Real Time Local Conditions
- ✓ Dynamic Input from Local Partners



- The following metrics are used as inputs in decision making:
  - **Hourly Fosberg Fire Weather Index (FFWI)** combines temperature, relative humidity, and 10-minute wind-speed factored into a single weather index correlated to influence on fire spread
  - **The Keetch-Byram Drought Index (KBDI)** assesses the risk of fire by representing the net effect of evapotranspiration and precipitation in producing cumulative moisture deficiency.
  - **Localized Vapor Pressure Deficit (VPD)** measures the department from normal dryness in a shorter term to complement KBDI
  - Forecasted wind speeds and potential sustained gusts.

# 2021 Community PSPS Exercises

## Tabletop Exercise Goals

Hone working relationships within public/private section	Validate communications protocols	Verify capability to support community during mitigation actions
<ul style="list-style-type: none"><li>✓ Confirm public communications interface</li><li>✓ Confirm Incident Command Structure for event response</li><li>✓ Confirm Emergency Operations Center liaison capability during event</li></ul>	<ul style="list-style-type: none"><li>✓ Confirm timing and appropriateness for public communications</li><li>✓ Confirm communications timing and viability for emergency management agency communication</li><li>✓ Confirm internal communication capabilities and processes</li></ul>	<ul style="list-style-type: none"><li>✓ Verify ability to deploy and operate Community Resource Centers prior to and during event</li><li>✓ Verify ability to interface with vulnerable populations within appropriate event timelines</li></ul>

## Completed Tabletop Exercises

- May 25: Siskiyou County
- May 27: Del Norte County

## Opportunities

- Improved engagement with AFN populations
- Enhance capability and prioritization of Community Resource Centers through deeper coordination with local governments

# Community Resource Centers

## Community Resource Centers (CRC) provide:

- ✓ 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, SatPhone, Radio, Cellular phone etc.
- ✓ Televisions
- ✓ On-site medical support (EMT-A at a minimum, Paramedic preferred)
- ✓ Charging stations

- PacifiCorp has been working with Community Partners to pre-identify CRC Locations
- As a result, 6 CRCs have been pre-identified

General Area	PSPS Zone Name	CRC Identified
Siskiyou County	Mt Shasta PSPS Zone	Mt Shasta Community Center
	Weed / Snowbrush PSPS Zone	Weed Community Center
	Dunsmuir PSPS Zone	Dunsmuir Community Center
Del Norte County	Cave Junction PSPS Zone	Selma Community Center Cave Junction Senior Center Cave Junction High School

- PacifiCorp continues to coordinate with County level emergency management agencies with a goal to identify at least one primary and alternate fixed CRC facility per PSPS Zone.
- Pacific Power also maintains contracts with private vendors to support the deployment temporary CRCs should fixed facilities not be feasible.
- PacifiCorp intends to continue to provide CRC services that adhere to COVID-19 standards put in place during 2020, regardless of any variations in local standards.



# Customer Survey Objectives & Results

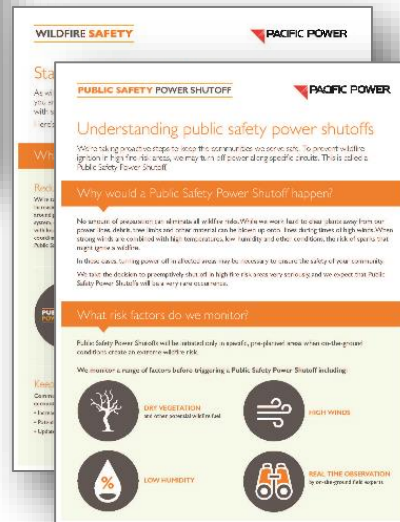
Survey Conducted from October 27, 2020 – November 25, 2020

Objectives	Target Audience	Major Takeaways
<ul style="list-style-type: none"><li>✓ Measure awareness of Pacific Power messages related to wildfire preparedness</li><li>✓ Identify recall of specific message topics</li><li>✓ Identify recall of message channels</li><li>✓ Measure recall and understanding of Public Safety Power Shutoff or PSPS</li><li>✓ Evaluate sources customers are most likely to turn to for information about PSPS</li><li>✓ Evaluate PSPS experience</li><li>✓ Explore actions taken by customers to prepare for wildfire season</li><li>✓ Measure awareness of Pacific Power's efforts to reduce the risk of wildfires</li></ul>	<ul style="list-style-type: none"><li>✓ Pacific Power residential and business customers in California</li><li>✓ Pacific Power critical customers</li><li>✓ <b>595 Total Surveys Completed</b><ul style="list-style-type: none"><li>➤ <b>80 Phone Based Surveys</b></li><li>➤ <b>515 Web Based Surveys</b></li></ul></li></ul>	<ul style="list-style-type: none"><li>✓ Most commonly recalls channels for wildfire prevention were <b>social networking</b> and <b>TV news</b></li><li>✓ Respondents rated the <b>Pacific Power website</b> as the <b>most useful</b> and clear source of information</li><li>✓ <b>68% reported to be more aware</b> of wildfire safety communications in than in May 2020</li><li>✓ <b>71% recall</b> seeing, hearing, or reading the phrase "<b>Public Safety Power Shutoff of PSPS</b>", up significantly from May 2020</li><li>✓ <b>26% are aware</b> of a PSPS map on <b>Pacific Power's website</b>, a <b>significant increase</b> since May 2020.</li><li>✓ Among those reporting that they rely on electricity for medical needs, <b>1/3 are aware of additional notices</b>, up <b>significantly</b> from May</li></ul>

# Research Recommendations

- ✓ Continue utilizing current strategy but *consider adding messaging targeted at critical customers and those with medical needs.*
- ✓ Continue leveraging TV news and social networks to educate customers about PSPS events.
- ✓ Promote **company website** as a source of information.
- ✓ Evaluate efficiency of communications via **newspapers and direct mail.**
- ✓ Continue providing timely and accurate notifications prior to a PSPS event *with an increased awareness of those relying on electricity for medical needs.*
- ✓ Continue **increasing awareness of PSPS designations and map availability** on the Pacific Power website (nearly a 100% increase in results from May to November)

## Customer Communication Wildfire Mitigation and Safety



# PSPS Website Notifications

MY ACCOUNTOUTAGES & SAFETYSAVINGS & ENERGY CHOICES

Public Safety Power Shutoff

< Back to wildfire safety

Make sure your contact information on your account is up-to-date to receive outage alerts and updates. You can [sign in to your account](#), or call 1-888-221-7070.

Some areas we serve are at an increased risk of catastrophic wildfires. As a safety precaution, electricity could be turned off in wildfire high risk areas during extreme weather events for public safety in an effort to prevent a fast-moving, hard to fight wildfire. The measure would only be used as a last resort to help ensure community safety.

The goal is to impact as few customers as possible in pre-identified areas through a highly-targeted, circuit by circuit manner in the rare chance a Public Safety Power Shutoff is used.

### Check if you're in a Public Safety Power Shutoff area

The outlined areas on the map represent potential Public Safety Power Shutoff areas. Enter your address below to see if you are located within one.\* You can click on an area of the map to see the zone name that corresponds to the table below.

Search Map

Map Satellite

Map data ©2021 Google Terms of Use Report a map error

\*Some customers outside of Public Safety Power Shutoff areas could be impacted by a Public Safety Power Shutoff due to the interconnected nature of the electrical grid.



Public safety power shutoff forecasting

This table shows the Public Safety Power Shutoff status.

NAME	TODAY	TOMORROW	2 DAYS OUT	3 DAYS OUT	4 DAYS OUT	5 DAYS OUT	6 DAYS OUT
Azalea / Glendale / Wolf Creek / Sunny Valley	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Cascade-Siskiyou NM	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Dunsmuir	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Happy Camp	Normal	Normal	Normal	Normal	Normal	Normal	Normal

WEBSITE TRAFFIC STATISTICS

12 Month, Day Peak Volume	1.16 million visits
12 Month, Hourly Peak Volume	111,021 visits

PacifiCorp continues to look for ways to increase website capability as needed

# External Coordination

## **Critical Infrastructure**

- Maintain lists of critical infrastructure by county in respective PSPS community plans
- Ensure lists contain 24/7 POC and validated annually (customer service support)
- Share lists annually with local public safety partners annually

## **Emergency Response Partners**

- Collaborate formally through annual tabletop exercises
- Engage and maintain local situational awareness through applicable county emergency manager(s)
- Deploy personnel to the local EOC as needed to coordinate responsibilities and distribute information
- Distribute updated situation reports with county emergency managers
- Bring on additional PacifiCorp personnel to support more frequent coordination

## **Tribal Communities**

- Hold twice monthly meetings with the Karuk Tribe
- Establish engagement with the Karuk Tribe newly hired emergency manager
- Continue to coordinate and provide information to tribal communities via county emergency managers
- Additionally, establish set meetings in the future to ensure a formal channel for coordination exists



# PSPS During a Pandemic - Impact

- PacifiCorp will continue to implement pandemic related policies in 2021
- In-person site visits will resume pending pandemic related local, state, and federal guidelines
- Public Sector
  - Coordination with public sector agencies such as county emergency management will occur as early as feasible as forecasting confidence becomes higher
  - 72-hour advance notice to Emergency Management Agencies is the goal
  - Current pandemic practices will be coordinated immediately upon identification of potential event
- Mutual Assistance
  - The company belongs to multiple Mutual Assistance Groups which it can leverage to mitigate any unforeseen shortfalls of either parts, equipment or manpower
  - Mutual Assistance Groups have created procedures for support during pandemic response
- Community Resource Centers
  - CRCs have developed plans to continue to support the community as needed while maintaining appropriate actions in accordance with state and county guidelines during a pandemic

# Medical Baseline & AFN Customers

## CARE Program – Update 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](https://www.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.
- Applications for Group Living Facilities and Agricultural Employee Housing updated.
- Tracking response rate to evaluate the response rate.

## Medical Customers

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



# Community Resiliency Backup Power

- Pacific Power's Community Resiliency Program includes a portfolio of resources for communities seeking to enhance their emergency management and disaster preparedness capabilities. These resources include:
  - **Technical assessments** to evaluate the potential costs and benefits of adding energy storage and associated technologies to critical facilities
    - Applications are currently being accepted.
    - Assessments are initiated on a first come, first served basis
- Grants are available for the purchase of portable **renewable backup generators** and the **installation of energy storage at critical facilities**
  - Grant requests will be accepted July - November 2021
  - Approximately \$400,000 of available funding in 2021
  - Funding requests are competitively evaluated
  - Working with local emergency managers throughout our service territory to identify potential projects.

Zone	Low Income	Life Support	Medical	AFN*	Medical Baseline
NON-PDZ	9,546	30	30	71	77
PDZ	2,671	2	1	23	16
<b>TOTAL</b>	<b>12,217</b>	<b>32</b>	<b>31</b>	<b>94</b>	<b>93</b>

All Customers in PDZ	
All customers in CA PDZ:	10,289
Critical Customers in CA PDZs:	210

\*AFN include customers self certified as needing additional notification. All Life Support, Medical, and Medical Baseline Customers are contacted individually prior to a PSPS.



# Master Metered Accounts

## Overview:

- 14 master metered facilities
  - 12 individual customers (master meter account holders)
  - 277 spaces
- Master meter operators were requested to identify their tenants' need for priority notice, which was updated into the company's customer service system



## New Protocols Started in 2020:

- New priority designation added to master meter operators for PSPS purposes
- New requirement to place an additional personal outbound call to master metered operations prior, during, and at the end of an event.
- New annual mailing of brochures to park owners to provide residents information on:
  - ✓ Wildfire mitigation plans
  - ✓ How to receive additional notice prior to a public safety shut off
  - ✓ Where to find additional information and resources online,
  - ✓ Tips for medical customers during an outage, and
  - ✓ Enrolling in the CARE program.

# Communication Carriers

- Communications carriers are incorporated into multiple components of PacifiCorp's PSPS readiness
- PacifiCorp performed written and verbal outreach to telecommunications and radio customers with the following objectives:
  - ✓ General readiness and preparation
  - ✓ Outline PSPS requirements, scope and protocols
  - ✓ Identify primary operational Point of Contact
  - ✓ Identify secondary operational Point of Contact
- Communication infrastructure is identified along with other critical infrastructure as a part of tabletop exercises
- PacifiCorp is working to incorporate this, along with other critical infrastructure, into PSPS sectionalizing and re-energization strategy where possible
- PacifiCorp is continuing to look for opportunities to increase coordination with telecommunications and radio customers





# PSPS Preparedness Opportunities

- Improve coordination and support of PacifiCorp's AFN and medical baseline customers through targeted messaging
- Explore opportunities to improve communication to customers regarding changing weather conditions
- Bolster existing Community Resource Center capabilities to better meet the current needs of the community, particularly its medical baseline and access and functional needs population
- Increase opportunities to collaborate with local emergency management through more frequent exercise events
- Increase opportunities to exercise notification procedures with critical facility POCs to validate/update contact information and increase familiarity around appropriate preparedness actions





Thank You

# Closing Remarks

Survey – Please return to [Drucilla.dunton@cpuc.ca.gov](mailto:Drucilla.dunton@cpuc.ca.gov)

## Schedule of Remaining Staff Briefings

-  PG&E Staff Briefing #1 – June 9<sup>th</sup> 1:00 p.m. – 3:00 p.m.
-  SDG&E Staff Briefing #1 – June 11<sup>th</sup> 12:30 p.m. – 2:30 p.m.
-  PG&E Staff Briefing #2 – June 28<sup>th</sup> 10:00 a.m. – 12:00 p.m.
-  SMJU Staff Briefing #2 – June 30<sup>th</sup> 2:30 p.m. – 4:30 p.m.
-  SDG&E Staff Briefing #2 – July 1<sup>st</sup> 1:00 p.m. – 3:00 p.m.





# California Public Utilities Commission

Questions?

Contact Shelby Chase at [Shelby.chase@cpuc.ca.gov](mailto:Shelby.chase@cpuc.ca.gov)  
and Dru Dunton at [Drucilla.dunton@cpuc.ca.gov](mailto:Drucilla.dunton@cpuc.ca.gov)