



Bear Valley
Electric Service, Inc.
A Subsidiary of American States Water Company

BVES PSPS Brief to CPUC Staff

July 15, 2022

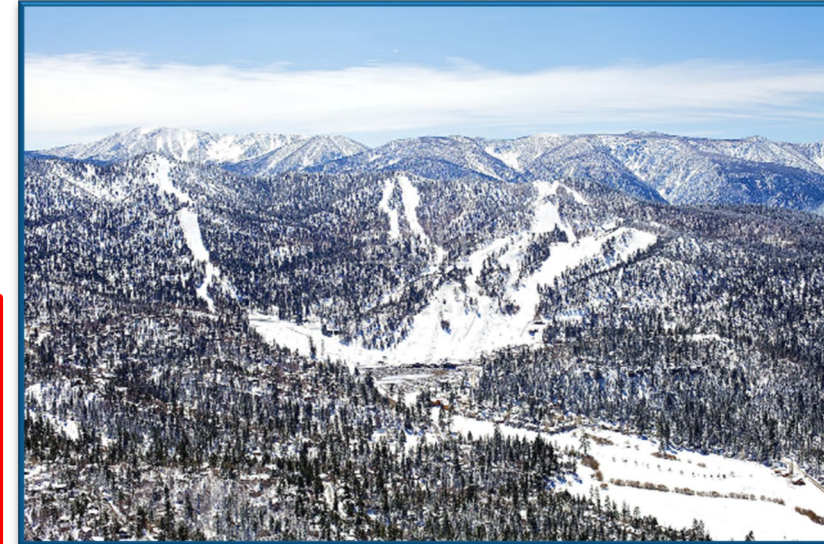
Paul Marconi, President & Safety Committee Chairman, BVES, Inc.

Outline

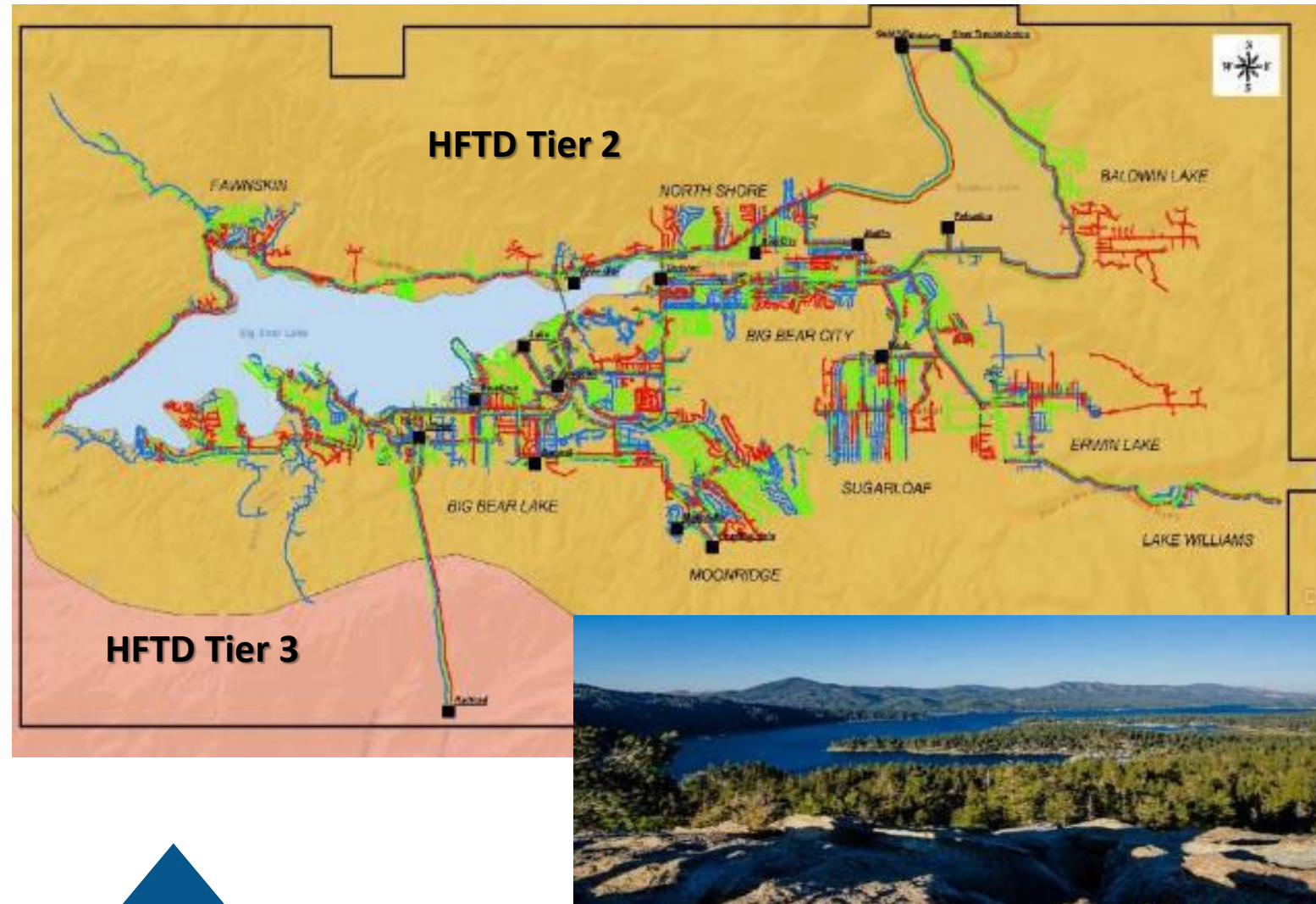
- Service Area Overview
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As of July 13, 2022, BVES's Safety Record:

- Accident/injury free for 1,148 days.
- No fatalities in over 10 years.
- No employee contact with High Voltage in over 10 years.
- No ignitions in over 10 years.



Service Area 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 vegetation density and mostly dry environment (80.5%).
- Entire Service Territory in High Fire Threat District (Tiers 2 & 3).
- Entire Service Territory in Heavy Loading District (>3,000 ft.).

Key jurisdictions: County of San Bernardino, City of Big Bear Lake, U.S. Forest Service.

Customers: 24,722 total [23,204 residential and 1,518 commercial].

Power Supplies: BVES system is entirely within the balancing area under the control of the California Independent System Operator. Supply lines to BVES are owned and operated by Southern California Edison.

Lessons Learned

- BVES has not had any PSPS activation events
- BVES does review other utility PSPS reports and public comments
- BVES finds these meetings are useful in learning from other utilities' experiences in PSPS
- From BVES PSPS exercises:
 - Need to continue to improve coordinated communication with external parties, partners, and agencies
 - Increase exercise complexities and interactions
 - Provide additional backup training for certain roles
 - Prepare for both in-person and remote work emergencies

2022 Goals

- Public safety: Reduce public risk to utility caused wildfires by at least 5,000 risk units per the BVES Fire Safety Matrix.
- Improve internal PSPS procedures: Issue revised internal PSPS Plan and Procedures Manual that is fully compliant with Phase 3 Guidelines.
- Improve external communications and outreach:
 - Establish stakeholder's portal and demonstrate the ability to communicate accurate information efficiently and in a timely manner.
 - Refine and verify key stakeholder and critical infrastructure contact lists prior to fire season.
- Improve communications with SCE staff: Work toward automated and seamless information sharing.

Community Resource Center (CRC)

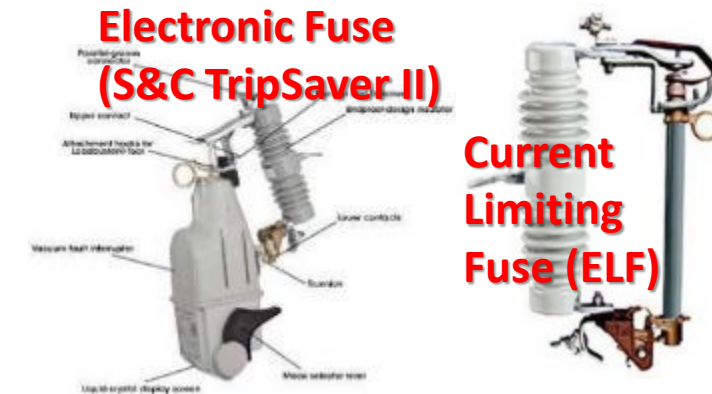
- BVES Community Resource Center is located at the BVES Main Facility (42020 Garstin Drive, Big Bear Lake, CA 92315).
- The CRC is equipped with:
 - Medical Equipment Access
 - Tents (2) and Chairs
 - Food and Water
 - Various electric equipment (Wi-Fi, power/extension cords, etc.)
 - Generators/Power Supplies
 - COVID-19 Related PPE (Masks, Hand Sanitizer and Gloves)
- CRC will be staffed by Customer Service and Operations Support Teams
- Alternate location ready to be established at Holiday Inn Resort The Lodge At Big Bear Lake (40650 Village Drive, Big Bear Lake, CA 92315).

Some Completed Grid Hardening Initiatives

- **Enhanced Vegetation Management:** Fully implemented ongoing program that established clearances tailored to BVES's service area, which are beyond GO-95 minimum standards.
- **Fuse Upgrade Program:** Eliminated all expulsion (conventional) fuses from the system. 3,114 expulsion fuses were replaced by 2,578 current limiting fuses and 536 electronic fuses.
- **34.5 kV Supply Line Re-closers:** All have been changed out to Pulse Conditioned IntelliRupters.
- **Weather Stations:** Installed 20 weather stations throughout service area.
- **ALERTWildfire HD Cameras:** Have 15 cameras in ALERTWildfire network providing complete coverage of service area.
- **System Sectionalized:** PSPS high risk areas sectionalized from rest of BVES system.
- **3rd Party Ground Patrol:** Fully implemented ongoing program that established an annual 3rd Party Ground Patrol of the overhead system. (In addition to BVES's annual GO-165 ground patrol.)
- **LiDAR:** Fully implemented ongoing program that established an annual Light Detection and Ranging (LiDAR) survey of system to identify areas where additional vegetation clearing is necessary.
- **UAV Surveys:** Fully implemented ongoing program that established an annual aerial HD imaging and thermography inspections of system facilities.
- **Risk Assessment & Mapping:** Developed area and system specific risk modeling to include risk map that shows the overall ignition probability and estimated wildfire consequence along the electric lines and equipment. Also developed climate-driven risk map and modeling based on various relevant weather scenarios. Results were used to inform 2022 WMP and 2022 work plan.
- **Forester:** Placed a full time contracted utility forester in the BVES service area as part of the BVES Team. The job duties include: inspections, auditing, customer contacts and issue resolution, work plans development, specialized projects, contractor safety observations, and vegetation management program documentation and data analysis.



Expulsion Fuse



IntelliRupter

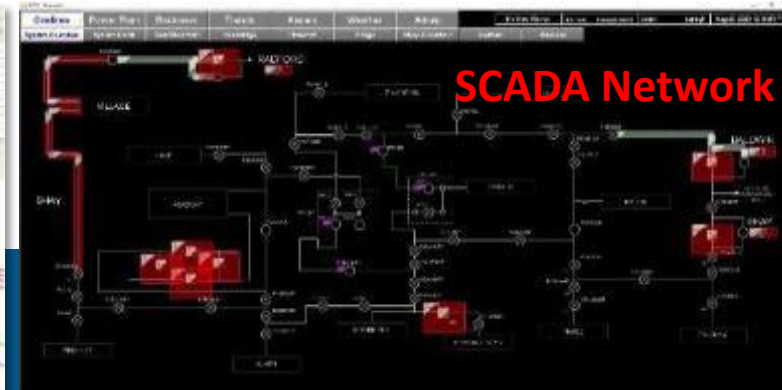
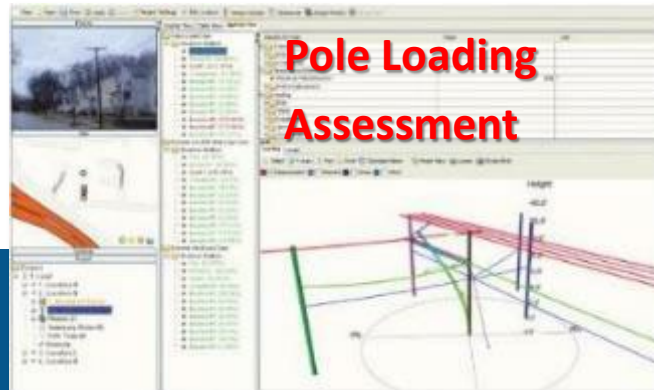
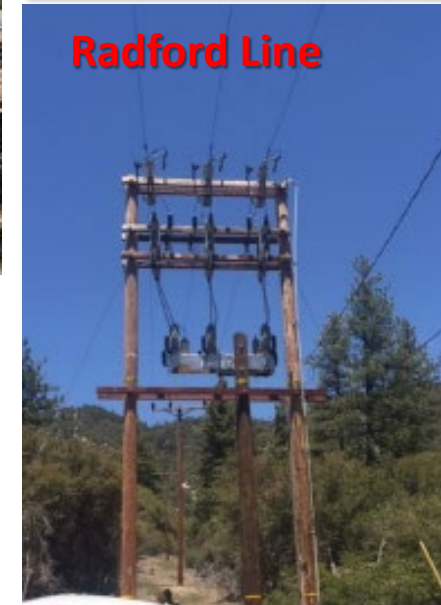


Deadman's Ridge ALERTWildfire HD Camera



Some Grid Hardening Initiatives In Progress

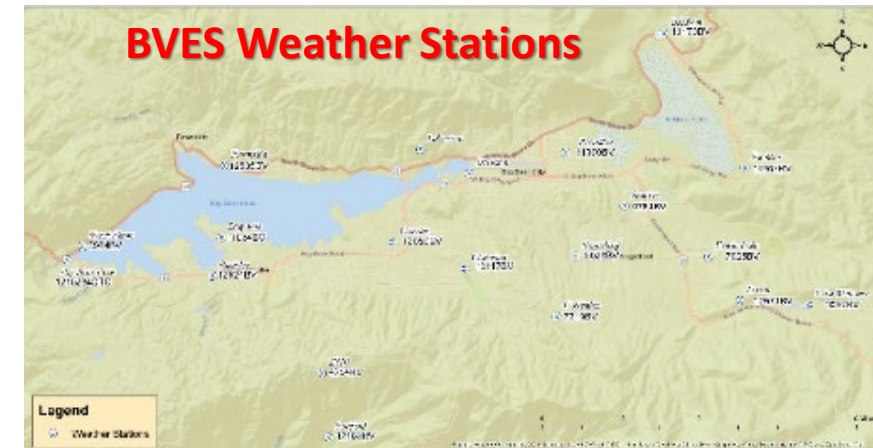
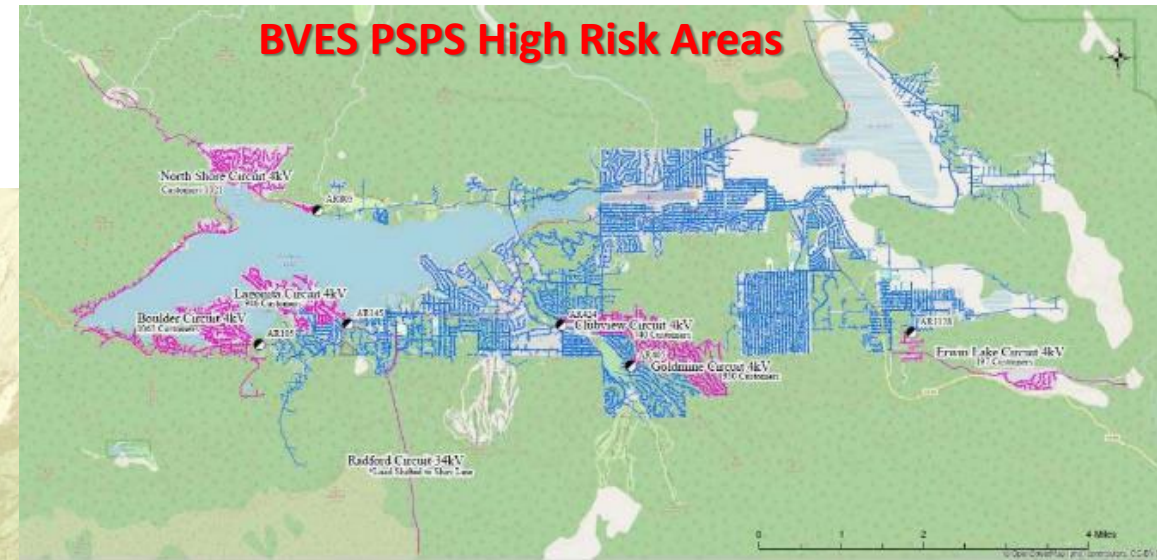
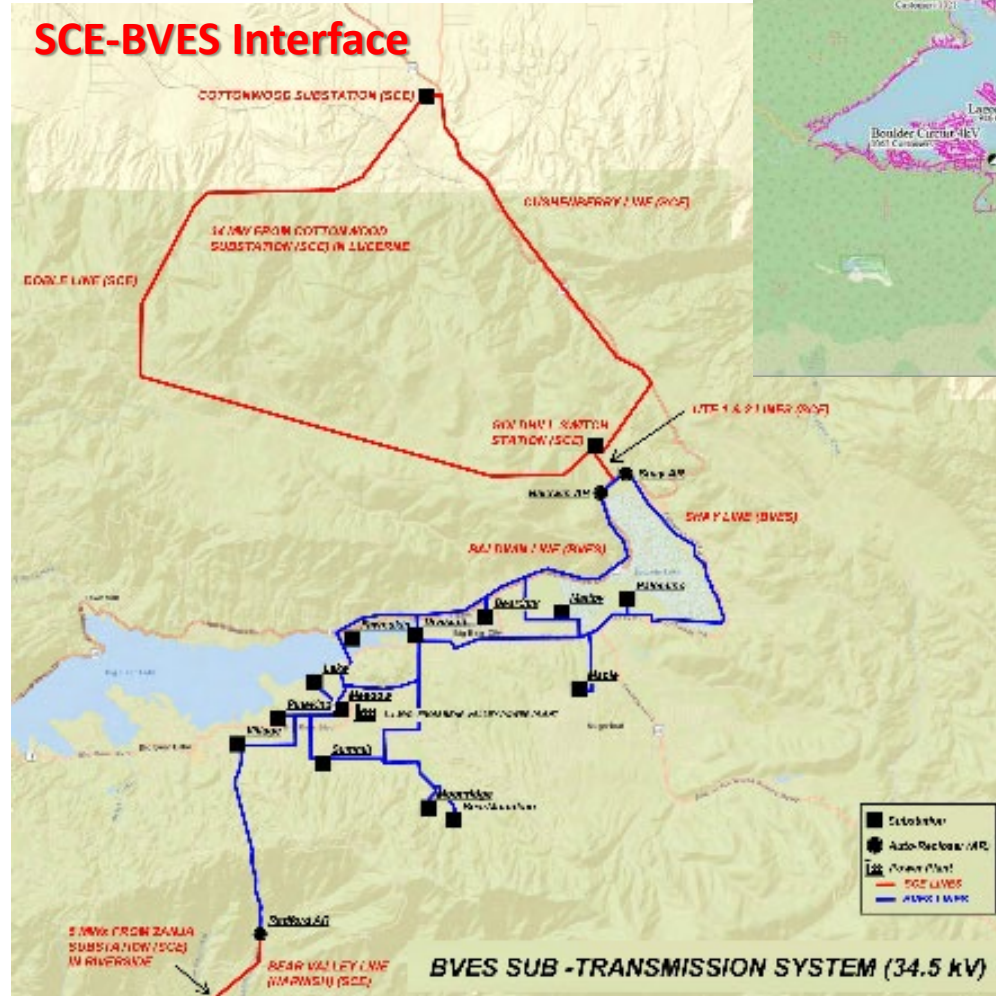
- **Covered Wire Project**: Replaces bare wire with covered wire (4.3 circuit miles on 34 kV & 8.6 circuit miles 4 kV systems per year). Over 27 circuit miles installed to date.
- **Pole Loading Assessment & Remediation Program**: Proactively assesses poles and replaces/remediates deficient poles. To date assessed 3,364 poles and replaced 1,164 poles. Program to be merged with Covered Wire Project.
- **Evacuation Route Hardening**: Hardens T&D facilities along main evacuation routes to prevent facilities from blocking or impeding evacuation if subject to wildfire. Hardened all primary routes (712 poles). Working on secondary routes that lead to primary routes.
- **Grid Automation Project**: Installs fiber network in service area, implements SCADA software and automates substations and field switches. Network completed.
 - **FLISR Project**: Installs 9 Fault Localization Isolation System Restoration devices on 34 kV system.
 - **Substation Automation**: Automates and connects 3 substations per year to SCADA network.
 - **Fault Indicator Installation**: Installs and connects 129 FIs to SCADA network.
- **Radford Line Replacement Project**: Replaces 2.8 circuit miles of 34 kV line & 78 wood poles with covered wire & 71 fire resistant poles in HFTD Tier 3 area.
- **Tree Attachment Removal Program**: Removes approximately 1,207 tree attachments. 644 remaining in system.
- **Real-time Wildfire Risk Modeling**: Working with Technosylva to implement wildfire forecasting applications to provide near real-time wildfire risk forecasts and conduct periodic asset risk analysis using historical weather climatology to support Wildfire Mitigation Plan (WMP) development and mitigation planning.



Grid Hardening

Resilience Measures

- Microgrids
 - BVES to provide more detail regarding status of planned Microgrid
 - Development of small-scale Solar-Battery Facility (5 MW AC Single-Axis tracker solar generation & 4 MW/16 MWh Li-ion NMC battery energy storage system)
- Resiliency zones
- Temporary generation
 - BVES has an 8.4 MW Gas Unit & 3.39 MW of Renewable Capacity



Exercise Reports

- BVES Conducted its Functional Exercise on June 21, 2022 and Tabletop Exercise on April 14, 2022.
 - 2022 is the first year BVES had an official PSPS functional exercise.
 - Comparing other approaches to functional exercises, BVES will incorporate ways to bridge the gap between how information is shown through video conference and how real-time emergencies will occur.
 - BVES did receive feedback that narrating the various PSPS elements was helpful for the listening audience.
- We assess that based on training, Staff is prepared to perform PSPS operations as needed.

PSPS Website & Notifications

PSPS Website

- During an active PSPS event BVES will utilize its [Public Safety Power Shutoff](#) section to communicate to customers.
- Public Safety Partner Portal activated in 2022

Notifications

- **Preparatory Phase:** Conducted annually well before extreme fire threat conditions are expected or when lessons learned or other conditions warrant updating plans, training, and/or outreach.
- **Warning Phase:** Starts 4-7 days prior to forecasted extreme fire threat weather and conditions. Mainly involves preparing to conduct PSPS when it is warranted and notifying local government, agencies, partner organizations, and customers. This phase includes various levels of notification at:
 - 4-7 days ahead, 4 days ahead, 2-3 days ahead 1-2 days ahead, and 1-4 hours ahead (de-energization imminent).
- **Implementation Phase:** Involves de-energizing “at-risk” circuits due to verified actual extreme fire threat weather and conditions and/or responding to SCE directed PSPS of SCE supply lines to BVES, Inc. service area.
- **Restoration Phase:** Involves restoring power to de-energized circuits following verification that actual extreme fire threat weather and conditions have subsided and/or restoring SCE supply lines when they are re-energized.
- **Reporting and Lessons Learned Phase:** Documenting and reporting to CPUC Safety Enforcement Division required information on the PSPS event and capturing lessons learned to ensure future PSPS events benefit from an understanding of what worked and what did not work in previous PSPS events.

Preparedness Coordination

Critical Infrastructure

- BVES currently maintains and updates a list of critical infrastructure partners to coordinate with during a PSPS event.

Local/Tribal/County Emergency Response

- Primary stakeholders are San Bernardino County, City of Big Bear Lake & U.S. Forest Service
- BVES does not have any Tribal Entities.
- Meetings held in June 2022 with additional sessions planned for September 2022.
- BVES currently maintains and updates a list of critical infrastructure partners to coordinate with during a PSPS event.
- Notification channels, plans, POCs identified, processes tested.
- Communications protocols in place to work closely with communications providers and other state agencies to ensure they have the most up to date information as early as possible.

Medical Baseline / Access and Functional Needs

- AFN Plan in accordance with Phase III requirements in development
- Proactive action to identify AFN:
 - All new customers queried about medical baseline and AFN.
 - All customer calls include medical baseline and AFN inquiry.
 - Mailer sent to all customers regarding AFN.
 - Comprehensive advertising campaign.
- BVES has 504 AFN customers, of those customers, 204 are medical baseline customers.
 - Maintains a list and contact information of any customers that are on our Medical Baseline Program or AFN (including beyond the meter customers).
 - BVES has the ability contact customers by IVR (Interactive Voice Response) call, text messages, door hangers, social media outlets, and website.

Customer Resources

Community Based Organization (CBO) Coordination:

- Chamber of Commerce
- Senior Center
- Mountain Mutual Aid Association
- DOVES
- Faith based organizations
- Local radio and news channels
- Lodging and transportation
- BVES Community Resource Center

Increasing resource awareness through:

- Customer surveys
- Annual newsletter
- Social media
- Advertising
- Local media channels
- Website
- customer service interaction
- Meetings
- Developing print materials
- Hosting quarterly stakeholder conference calls
- Providing additional services such as small scale battery backup, lodging, and transportation.

Questions?



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