



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

BVES PSPS Pre-Season Public Brief

August 1, 2022

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

Outline

**Be
Vigilant about
Emphasizing
Safety in all that we do!**

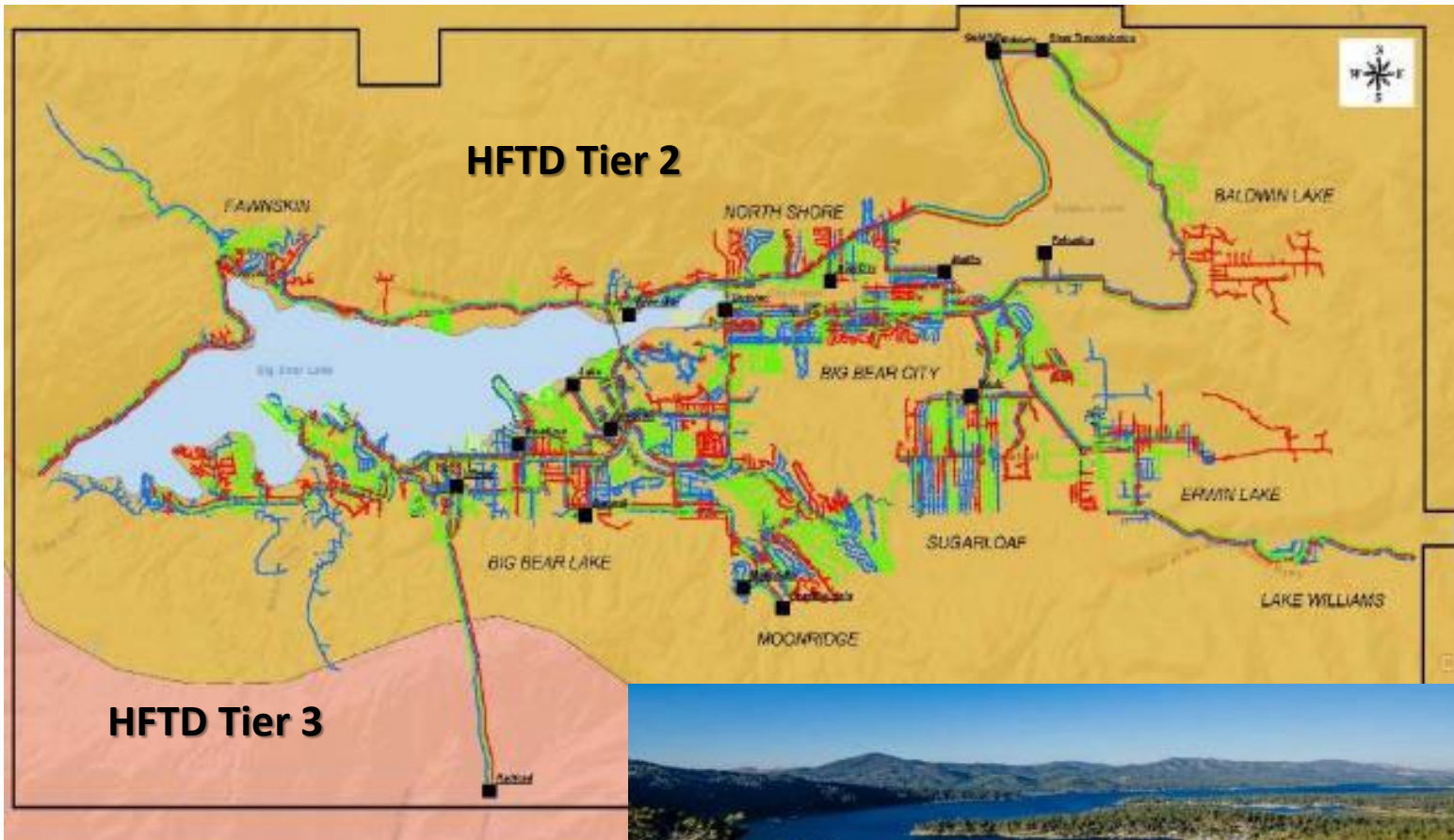
- Service Area Overview
- Pre-Season Report (PRESR)
 - Community Resource Center (CRC) Plan
 - Critical Facilities and Infrastructure Plan
 - PSPS Exercise Reports
 - Education and Outreach
 - Notification Plan
- Improvements To Data Accuracy In Post Event Reporting
- EPSS/Fast Trip/ Fast Curve Settings
- Grid Hardening
- PSPS Website
- Medical Baseline / Access and Functional Needs
- Customer Resources

As of July 28, 2022, BVES's Safety Record:

- Accident/injury free for 1,163 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.

Community Resource Center (CRC) Plan

- BVES Community Resource Center is located at the BVES Main Facility (42020 Garstin Drive, Big Bear Lake, CA 92315).
 - 15 minute drive maximum from furthest point in service area.
 - Established working relationship with City of Big Bear Lake to utilize Mountain Transit for transportation assistance.
- The CRC is equipped with:

Medical Equipment	Tents (2) & Chairs	Restrooms
Air Filters	Heaters	Perishable Snacks and Water
First Aid Kits	PSPS Representatives	Phone Charging
Various Electrical Equipment (Wi-Fi, Power Cords, etc.)	Portable Back Up Batteries	Generators/Power Supplies
COVID-19 Related PPE (Masks, Hand Sanitizer and Gloves)		

- CRC is 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).

Critical Facilities and Infrastructure Plan

Critical Infrastructure

- BVES currently maintains a list of critical infrastructure partners to coordinate with during a PSPS event.
 - List is tested for accuracy.
 - 1^o, 2^o, & 3^o contacts.

Local/Tribal/County Emergency Response

- Primary stakeholders are CAL FIRE, Big Bear Fire Department, 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 a list of local government & agencies, key stakeholders in the community, and critical infrastructure partners to coordinate with during a PSPS event. List is tested for accuracy. 1^o, 2^o, & 3^o contacts.
- 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.
- BVES entered into a confidentiality agreements with: Big Bear Fire Department and the City of Big Bear Lake to share information for Medical Baseline and Access and Functional Needs Customers. Working SB County on similar agreement.

PSPS 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 received feedback that narrating the various PSPS elements was helpful for the listening audience.
- Based on training, we have assessed that staff are prepared to perform PSPS operations as needed.

Education and Outreach

- As of June 30, 2022, BVES initiated 286 community engagement events. Last year (2021, BVES had 602 community engagement events).
- Two community briefs in June 2022. Two additional community briefs scheduled for September 2022.
- Stakeholders brief scheduled for early September 2022.
- Public Safety Partner Portal activated in 2022.
- Continued enhancements made to PSPS information website.
 - Updated content.
 - Improved presentation and accessibility to content.

Notification Plan

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.
- **Stage 1 (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 and 1-2 days ahead.
- **Stage 2 (De-energization imminent):** Decision has been made to de-energize – notifications sent 1-4 hours ahead.
- **Stage 3 (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.
- **Stage 4 (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.
- **Stage 5 (Reporting and Lessons Learned Phase):** Event concludes. 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.

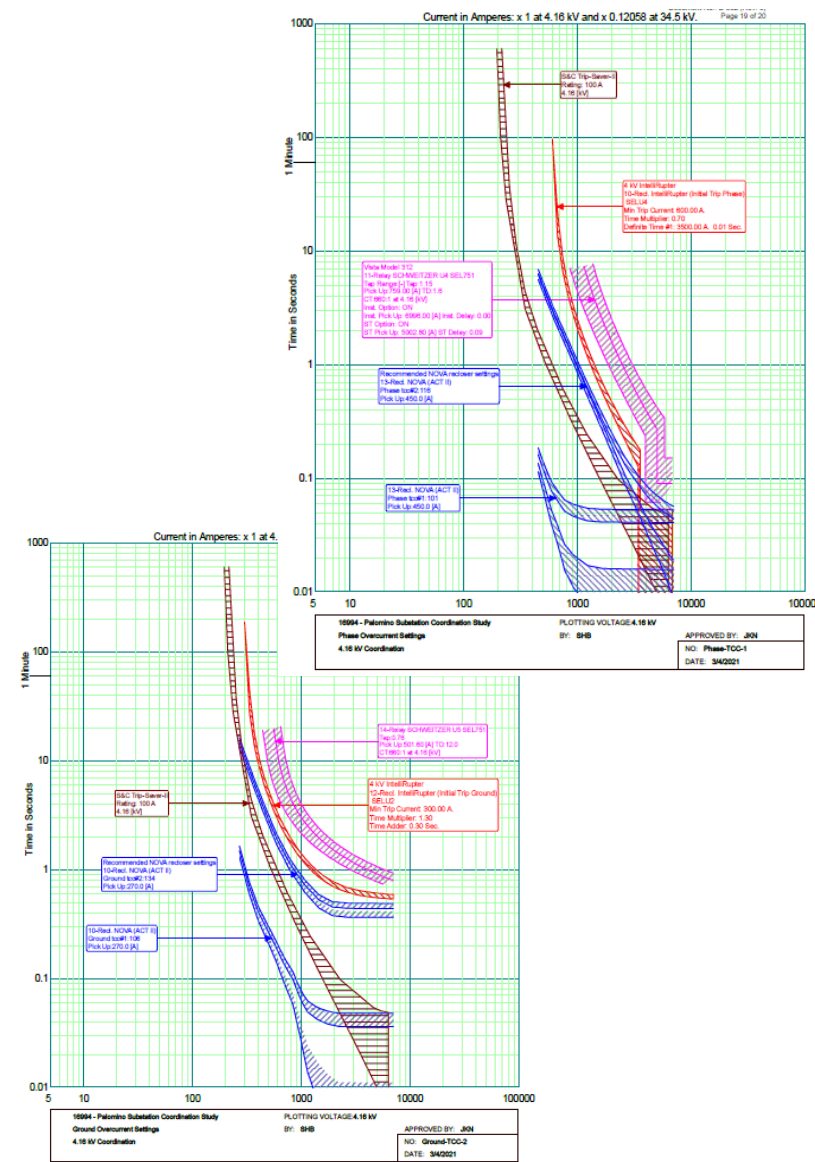
Improvements To Data Accuracy In Post Event Reporting

- **BVES has not had any PSPS activation events.**
 - BVES reviews other utility PSPS reports and public comments for lessons learned including data accuracy in post event reports.
- BVES has fully participated in PSPS workshops aimed at data accuracy in post event reporting and provided input to templates.
- BVES finds these meetings and workshops to be useful in learning from other utilities' experiences in PSPS and the challenges in data accuracy in post event reporting.



EPSS / Fast Trip / Fast Curve

- Bear Valley does not utilize fast trip settings specific to the fire season.
 - Device settings are established in coordination studies optimized for public safety and protection of utility and customer equipment.
- On “Dry” days, Bear Valley sets all automatic trip devices to manual.
 - Anytime a device trips, Bear Valley requires a patrol of the de-energized portions of the circuit (or portions of the circuit) and correction of any issues discovered prior to “testing” the circuit.

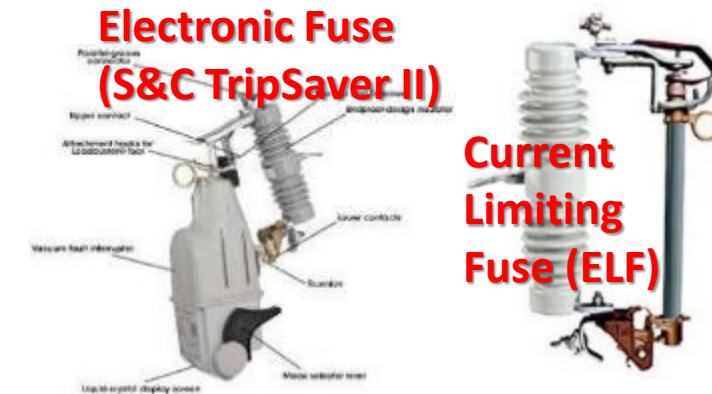


Some Completed Grid Hardening Initiatives

- **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 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



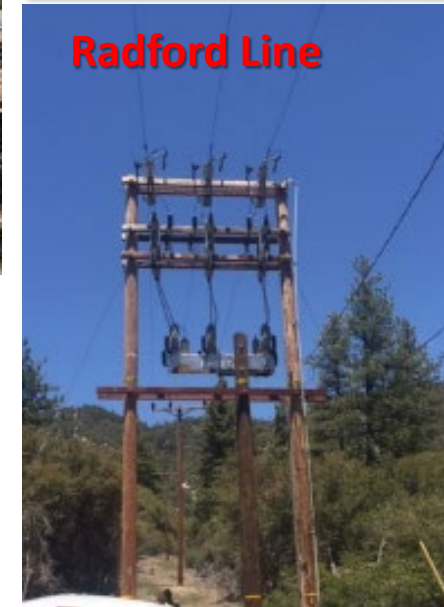
Some Grid Hardening Initiatives In Progress

- **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.

Wire Mesh
Wrap



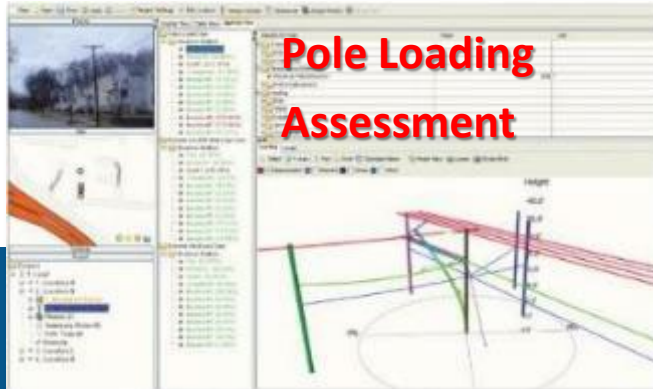
Radford Line



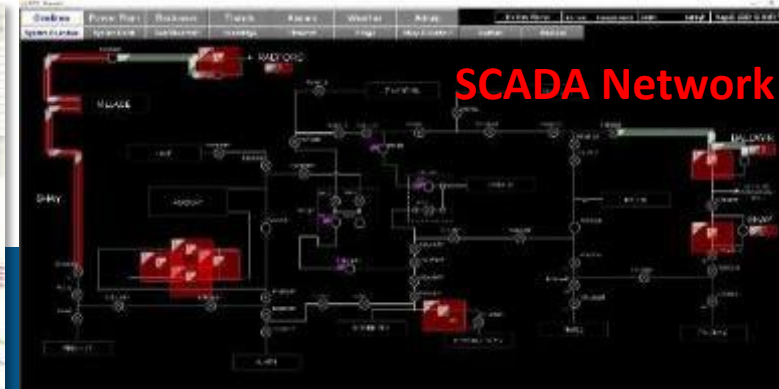
Tree Attachment



Pole Loading
Assessment



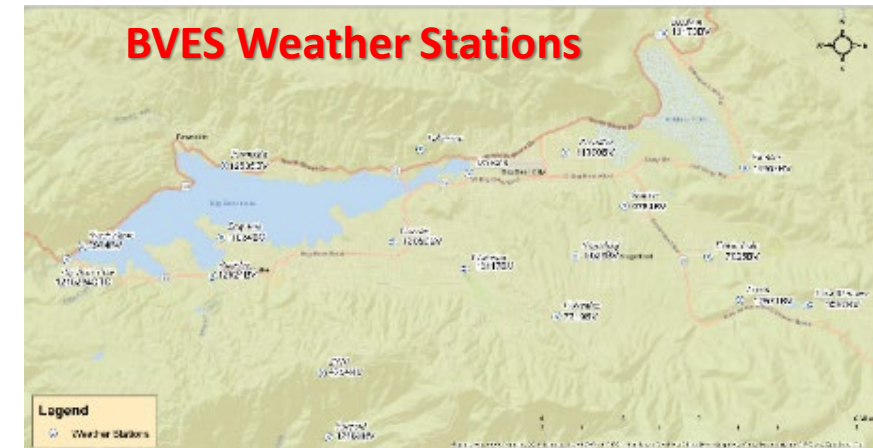
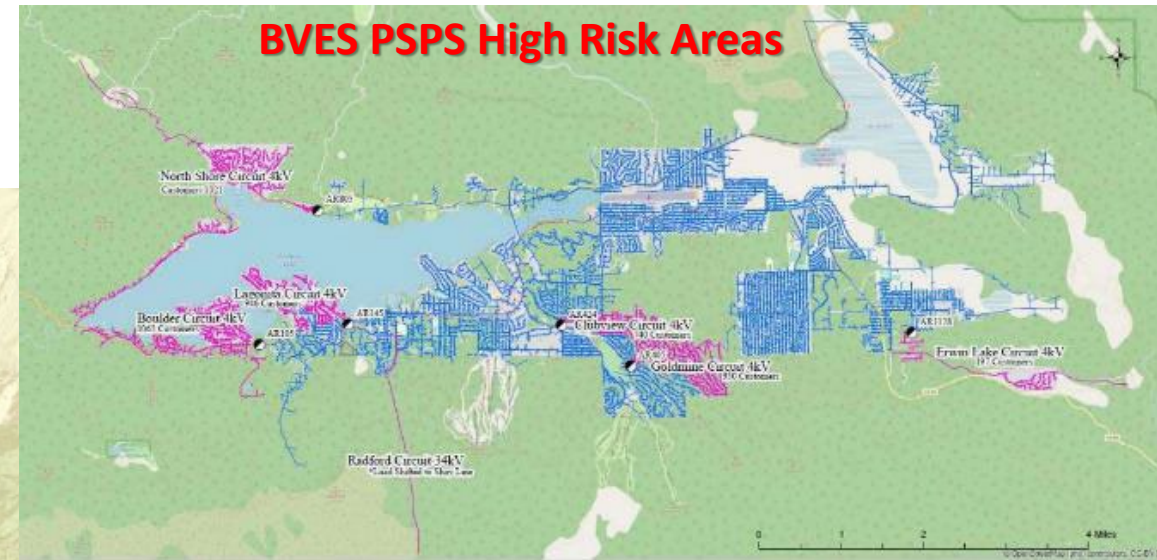
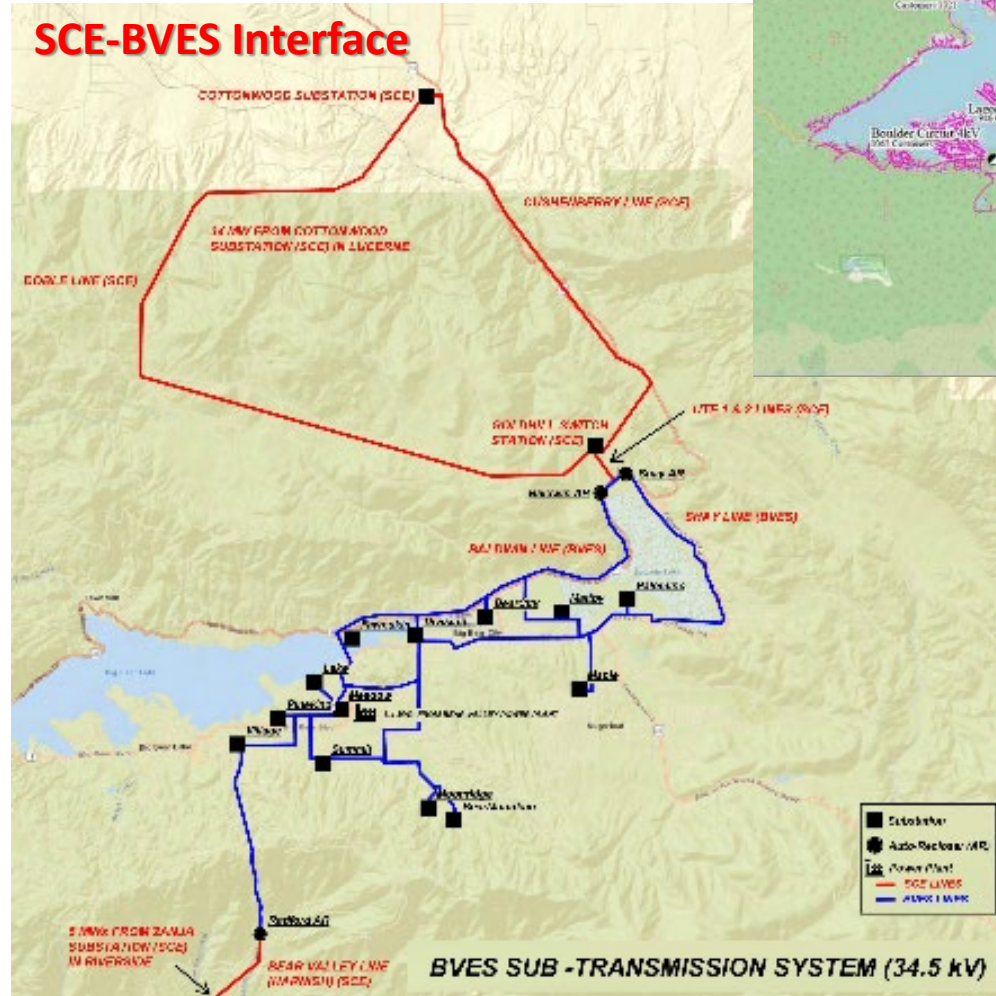
SCADA Network



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



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 added AFN questions to our Wildfire Survey, concluded on June 28, 2022, to help identify additional customers
- BVES has 504 (2% of overall) AFN customers, of those customers, 204 (<1% of overall) 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.
- The bi-annual Wildfire Survey

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