DATA REQUEST RESPONSE
Bear Valley Electric Service
BVES R.18-10-007

Response provided by:	Paul Marconi
Title:	Director Bear Valley Electric Service
Data Request Number:	Data Request No. OSABV-01
Data Request Originator:	Joan E. Weber, Office of Safety Advocates
Date Received:	February 23, 2019
Date Due:	February 28, 2019
Date Provided:	February 28, 2019

Data Request No. OSABV-01. Received via email from Joan E. Weber of the Office of Safety Advocates (OSA) on February 23, 2019:

1. **Regarding your distribution infrastructure that is located within the boundaries of the Commission's High Fire-Threat District Map, what are the maximum wind speeds that these existing facilities have been designed to withstand? Please provide total circuit miles and maximum wind speed data for facilities in each of the wildfire threat designation areas (Zone 1, Tier 2, and Tier 3). How many circuit miles located within each of the three designated areas are currently designed to withstand wind gusts greater than 100 mph?**

Response:

As stated in BVES' Wildfire Mitigation Plan, BVES service area is entirely:

- Within the High Fire Threat District (HFTD) per General Order (GO) 95.
- Above 3,000 feet in elevation; thereby requiring per GO 95 "Heady Loading District" strength requirements.

BVES constructs to GO 95 standards.

GO 95 Rule 43.1 specifies loading shall be taken as the resultant stress due to wind, ice and dead weight under the following conditions:

A. Wind: A horizontal wind pressure of 6 pounds per square foot of projected area on cylindrical surfaces, and 10 pounds per square foot on flat surfaces shall

be assumed. Where latticed structures are used, the actual exposed area of one lateral face shall be increased by 50% to allow for pressure on the opposite face, provided this computation does not indicate a greater pressure than would occur on a solid structure of the same outside dimensions, under which conditions the latter shall be taken.

B. Ice: A radial thickness of one–half inches of ice, weighing 57 pounds per cubic foot, on all conductors shall be assumed in computing vertical and wind loadings.

C. Temperature: Conductor temperature shall be assumed to be 0°F at the time of maximum loading. A conductor temperature of at least 130°F shall also be assumed for computing sag and its effect on structural loads due to weight span.

BVES has approximately 210.8 circuit miles of overhead facilities all of which are in the HFTD. Approximately 2.8 circuit miles are in the HFTD Tier 3 area and 207.9 circuit miles are in the HFTD Tier 2 area.

2. **How many circuit miles of distribution facilities do you own and/or operate that are located within the Commission's High Fire-Threat District Map (including all areas Zone 1, Tier 2, and Tier 3) that are more than 50 years old? How many circuit miles are more than 80 years old? For the circuits that are more than 80 years old, where are they located physically, what fire threat area are they in, and what is their circuit number and/or name?**

Response:

BVES tracks the age of individual facilities that make up its circuits. As poles are replaced on a circuit or branches are added to a circuit, tracking the circuit mile age is not practical. The following table provides the age of overhead facilities in the HFTD Tier 2 and Tier 3 areas in BVES service area.

	# of Poles in Tier 2	# of Poles in Tier 2
Over 50 Year and Under 80 Year	3256	52
Over 80 Years	6	0
Total Poles	8683	55

Assuming that a span length is on average equal, which is not always the case, we can estimate that of the 207.9 circuit miles in the HFTD Tier 2 area, 78.0 circuit miles are over 50 and under 80 years old and 0.1 circuit miles are over 80 years old. Similarly, we can estimate that of the 2.8 circuit miles in the HFTD Tier 3 area, 2.6 circuit miles are over 50 and under 80 years old and 0.0 circuit miles are over 80 years old.

3. **Do you have the ability now, or will you have the ability after your proposed mitigations are implemented, to be able to change the settings of your SCADA from one centralized control center? For instance, can you change the settings on your reclosers and de-energize your distribution circuits from one centralized location or is the architecture of your SCADA system decentralized and controls must be activated from multiple locations to be accomplished? What other types of circuit protection/isolation devices do you own that can be controlled by your SCADA system and where are those controls located?**

Response:

BVES does not currently have the ability to change the settings on distribution equipment such as reclosers with SCADA. BVES has a very basic SCADA that only includes 4 re-closers on the sub-transmission system (34.5 kV). No distribution circuits are currently monitored or controlled from SCADA.

BVES is implementing a Grid Automation project and expects to be able to control equipment such as reclosers and to be able to de-energize circuits via SCADA upon completion of this project. This is proposed as a 4-year project from 2019 to 2022.

4. **How many circuit miles do you currently have of small conductor (#6) in your distribution system located within the designated areas of the Commission's High Fire-Threat Map? If you have small conductor located within the three designated areas (Zone 1, Tier 2, Tier 3) of the map, how many circuit miles do you have in each of the three areas and where are these circuits located?**

   Response:
   There are areas along the BVES' distribution circuits that have small conductor (#6). Small conductor (#6) are mostly towards the end of each circuit. BVES estimates that the total circuit miles of small conductor (#6) to be approximately 97 circuit miles.

5. **How many circuit miles, if any, do you currently have of primary voltage facilities that are configured with a three-wire system, which doesn't include a neutral wire, in your distribution network and are located within the designated areas shown on the Commission's High Fire-Threat Map? Where are these facilities located?**

   Response:
   BVES' sub-transmission system (34.5 kV) is a delta configuration. This system is entirely within the HFTD and is approximately 28.9 circuit miles.
   All of BVES' distribution system (4 kV) is wye configuration and include a neutral wire.

6. **Please provide copies of all distribution circuit maps of facilities located within the boundaries of the Commission's High Fire-Threat Map including the three designated areas (Zone 1, Tier 2, Tier 3) or a link that provides access to these maps.**

   Response:
   Please see BVES circuit maps pdf titled "BVES Distribution Circuit Maps".
   For security purposes, BVES will forward circuit maps to the requestor of this data request - Joan E. Weber (OSA) in a separate email.
   BVES requests that parties interested in BVES circuit maps to please contact BVES Director Paul Marconi.