

Bear Valley Electric Service

Wildfire Mitigation Plan Attachment A



Submitted by:

Navigant Consulting, Inc.
35 Iron Point Circle
Suite 225
Folsom, CA 95630

858.354.8333
navigant.com

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APPENDIX A. ATTACHMENT A SPREADSHEET

§8386 (c) (3)(4)(8)(9): Wildfire Mitigation Strategies and Programs									
Program/Strategy	Asset Addressed	Annual Cost	Costs Currently Reflected in Revenue Requirement?	Compliance Requirement?	Identify any Aspects of Plan/Strategy and Associated Funding That is or Will Be Addressed in Another Case	Identify Memorandum Accounts Where Costs of Program/Strategy Are Being Tracked and Explain How Double Tracking is Prevented	Previously Included in RAMP?	Evaluation Metric(s)	Assumptions Underlying Metric
OPERATIONAL PRACTICES									
Blocking Reclosers	All Reclosers	Expense ¹	Yes ¹	No	NA	NA	Y	NA	NA
Fast-Curve Settings	All Circuit Breakers	Expense ¹	Yes ¹	No	NA	NA	Y	NA	NA
Sensitive Relay Settings	All Circuit Breakers	Expense ¹	Yes ¹	No	NA	NA	Y	NA	NA
Red Flag Warning Period / Special Work Conditions	All Circuit Recloser Settings; Trip Savers; At-Risk Circuits	Expense ¹	Yes ¹	PU Code Sections 451 and 399.2(a)	Proceeding 18-12-005	NA	N	NA	NA
Wildfire Infrastructure Protection Teams	All Assets	Expense ¹	Yes ¹	PU Code Sections 451 and 399.2(a); GO 166	Proceeding 18-12-005	NA	N	NA	NA
PLANS FOR INSPECTION									
1st Annual On-Ground Inspection	All Assets	Expense ¹	Yes ¹	GO 165	BVES GRC A.17-05-004	NA	Y	NA	NA
2nd Annual On-Ground Inspection	All Assets	\$90,000 Expense ²	No ²	No	NA	WMP Memorandum Account	Y	NA	NA
Preventative Maintenance of Overhead Lines Program	All Overhead Lines (Over a 3 year period)	Expense ¹	Yes ¹	No	BVES GRC A.17-05-004	NA	Y	NA	NA

Electrical Preventative Maintenance Program	All Substations; All Distribution Equipment	Expense ¹	Yes ¹	GO-174	BVES GRC A.17-05-004	NA	Y	NA	NA
LIDAR Inspection	Radford 34kV Line	\$220,000 Expense ²	No ²	No	NA	WMP Memorandum Account	N	NA	NA
GIS Data Collection & Sharing	All Assets	Expense ¹	Yes ¹	No	NA	NA	NA	NA	NA
VEGETATION MANAGEMENT									
Compliance Related Work ⁴	All Assets	Expense ^{1,3}	Yes ^{1,3}	GO 95; D.17-12-024 (Decision Adopting Regulations to Enhance Fire Safety in the High Fire Threat District)	BVES GRC A.17-05-004	Fire Hazard Prevention Memorandum Account (FHPMA); Costs with contractor recorded and tracked separately to avoid double tracking	Y	Average time for clearance permissions from local agencies; number of customer service calls about tree cutting	NA
SYSTEM HARDENING									
Pole Loading	All Distribution Poles (8,000 total; 2,000 per year)	Capital & O&M Expense ¹	Yes ¹	GO-95	BVES GRC A.17-05-004	NA	Y	Number of Poles Failing Assessment Replaced / Remediated	Ends once all 8,000 poles have been assessed (in 4 years)
Covered Conductor Replacement Pilot Program	Overhead distribution in high risk areas (3 miles)	\$458,000 Capital ²	No ²	No	NA	WMP Memorandum Account	Y	Length of bare wired covered	Funding for pilot is approved; ends once construction ends
Covered Conductor Wrap Pilot Program	Overhead distribution in high risk areas (3 miles)	\$292,000 Capital ²	No ²	No	NA	WMP Memorandum Account	Y	Length of bare wired covered	Funding for pilot is approved; ends once construction ends
Radford Line Covered Conductor Replacement Project	Radford 34kV Line HFTD Tier 3 line	\$2.5 million Capital ²	No ²	No	NA	WMP Memorandum Account	Y	Length of bare wired covered	Funding for Radford line is approved; ends once construction ends

Undergrounding	Ute Line; Big Bear Lake Village Circuit	\$3.2 million Capital ²	No ²	No	NA	WMP Memorandum Account	N	NA	NA
Substation Upgrades	Pineknott	Capital ¹	Yes ¹	GO-174	BVES GRC A.17-05-004	NA	Y	NA	NA
Fuse Upgrades (Replace fuses with current limiting (non-expulsion) and electronic fuses)	All Fuses	\$2.6 million Capital ²	No ²	No	NA	WMP Memorandum Account	Y	Number of fuses replaced by fused trip savers and current limiting fuses	Funding for fuse upgrades is approved; ends once all have been replaced
Tree Attachment Removals	All Tree Attachments (1,200 total; 300 per year)	Capital ¹	Yes ¹	GO-95	BVES GRC A.17-05-004	NA	Y	Number of Tree Attachments Removed	Target removal of 300 attachments per year; end tracking in 2022
SITUATIONAL AWARENESS									
SCADA Installations	All Assets	Capital ¹	Yes ¹	No	BVES GRC A.17-05-004	NA	Y	NA	NA
GIS Based-Applications - Outage Management System (OMS)	All Circuits	Expense ¹	Yes ¹	No	BVES GRC A.17-05-004	NA	N	NA	NA
GIS Based-Applications - Interactive Voice Response (IVR)	All Circuits	Expense ¹	Yes ¹	No	BVES GRC A.17-05-004	NA	N	NA	NA
Web-Based Weather Resources	All Assets	Expense ¹	Yes ¹	No	Proceeding 18-12-005	NA	N	NA	NA
BVES-Owned Weather Stations (pole top mounted)	Overhead Distribution System	\$122,000 Capital ² (\$95,000 to install 10 additional weather stations and \$27,000 to integrate with SCADA)	No ²	ESRB-8	Proceeding 18-12-005	WMP Memorandum Account	N	Max recorded sustained winds and wind gusts; frequency of high sustained high winds and wind gusts	NA

Weather Forecasting (Consulting Services)	All Assets	\$46,800 Expense ²	No ²	ESRB-8	Proceeding 18-12-005	WMP Memorandum Account	N	Number of NFDRS "Very Dry" and "Dry" days	NA
Remote Monitoring (Cameras) to be planned this period	Radford 34 kV Line; Other High-Risk Circuits	No expense this plan period.	No	ESRB-8	Proceeding 18-12-005	NA	N	NA	NA
Grid Automation (Historian & Software Capabilities)	All Circuits	Capital ¹	Yes ¹	No	BVES GRC A.17-05-004	NA	Y	NA	NA
RESPONSE & RECOVERY									
Public Safety Power Shut-Off / De-Energization	All Assets	\$42,000 Expense ² for overtime only.	No ²	PU Code Sections 451 and 399.2(a)	Proceeding 18-12-005	WMP Memorandum Account	N	Number of PSPS Events	NA
Post Incident Recovery, Restoration & Remediation	All Assets	Incident specific	Yes ¹ plus CEMA if applicable	GO 166	NA	CEMA if applicable	NA	NA	NA

Notes:

¹Expense is being addressed in the BVES' General Rate Case A.17-05-004 submitted on May 1, 2017, which is pending decision.

²New expense. BVES requests by approval of this Wildfire Mitigation Plan, that the CPUC authorize BVES to establish a memorandum account to track and recover the expenses related to this project/program that are not included in BVES' BRRR.

³BVES' Fire Hazard Prevention Memorandum Account (FHPMA).

⁴This includes: (1) 72 in Minimum Radial Clearance; (2) No vertical coverage be allowed above BVES sub-transmission lines (34,500 V); (3) All vegetation within the drip line of primary conductors that has the potential of growing into the secondary system or within 12 feet of the energized primary conductors within the 3-year vegetation management program cycle will be removed; (4) Dead, rotten or diseased trees or dead, rotten or diseased portions of otherwise healthy trees – also known as "hazard trees" -- overhang or lean toward and may fall into a span of power lines, said trees or portions thereof should be removed. Note that this may apply to trees outside the clearance zone; and (5) Exceptions for tree trunks or major limbs that meet the following criteria: at the primary conductor level, mature tree trunks that are greater than 18 inches in diameter and major limbs that are greater than 10 inches in diameter with sufficient strength and rigidity may encroach within the minimum safe distance (72-inches) but not within 18 inches of the bare line conductors. The rigidity of the tree trunk or major limb must be such that it would be impossible for it to encroach within 12 inches of the bare conductor at any time during high wind, heavy icing and snow, or other conditions.