

ROSEVILLE ELECTRIC UTILITY SECURITY PLAN

**PUBLIC REPORT ON ROSEVILLE ELECTRIC UTILITY'S
PHYSICAL SECURITY PROGRAM FOR DISTRIBUTION-
LEVEL FACILITIES**

July 1, 2021

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I. OVERVIEW

A. GOAL OF UTILITY SECURITY PLAN

Ensuring the safety of its facilities is a top priority for Roseville Electric Utility (Roseville). Roseville prioritizes safety in all aspects of its design, operation, and maintenance practices. The overarching goal of this Utility Security Plan is to describe Roseville's risk management approach concerning "Covered Distribution Facilities" physical security as defined by the Joint IOU/POU Straw Proposal and D.19-01-018. Appropriate consideration of resiliency, impact, and cost factors were also considered.

B. DESCRIPTION OF ROSEVILLE ELECTRIC UTILITY

Roseville Electric Utility, as the City of Roseville's community-owned electric service, has provided reliable and affordable electric service for more than 100 years. The City of Roseville is located in Placer County, northeast of Sacramento, California along Interstate 80 and State Route 65 (38°45'9"N, 121°17'22" W), and has a population of nearly 140,000. In 2020, Roseville Electric Utility employed 153 people and served 63,507 customers, including 56,467 residential and 7,040 business customers. Roseville owns its distribution system, fifteen distribution substations (including two Receiving Substations). Roseville's system serves an area of 43 square miles, and maintains 145 miles of overhead lines and more than 704 miles of underground lines.

C. RESULTS OF UTILITY SECURITY PLAN ASSESSEMENT

Roseville has fifteen Distribution Facilities located within its service territory meeting the definition of Distribution Facility per D.19-01-018. A Distribution Facility is defined as an electric power substation associated with the distribution system and the primary feeders for supply to residential, commercial and/or industrial loads.

All fifteen Distribution Facilities were considered and evaluated in Roseville's Physical Security Program for Distribution Level Facilities. In order to identify which of the fifteen Distribution Substations within Roseville's service territory provide electricity to critical loads, a thorough risk assessment was completed in Section VI. The assessment identified four "Covered Distribution Facilities" as defined by the Joint IOU/POU Straw Proposal and D.19-01-018.

After an extensive review of Roseville's existing methodology, it was determined that the risk level for the four Covered Distribution Facilities was medium, with existing and planned mitigating measures sufficient to effectively mitigate the identified risks of a physical attack to a low/very low probability. Roseville continues to identify and assess potential risks associated with Covered Distribution Facilities and continues to apply the methodologies described in this document.

II. BACKGROUND

On April 16, 2013, one or more individuals attacked equipment located within Pacific Gas and Electric Company's (PG&E) Metcalf Transmission Substation, ultimately damaging 17 transformers. These individuals also cut nearby fiber-optic telecommunication cables owned by AT&T. In response to the attack, the Federal Energy Regulatory Commission (FERC) directed the North American Electric Reliability Corporation (NERC) to develop new physical security requirements, resulting in the creation of CIP-014.

At the state level, Senator Jerry Hill authored SB 699 (2014), directing the California Public Utilities Commission (CPUC) to "consider adopting rules to address the physical security risks to the distribution systems of electrical corporations." In response to SB 699, the CPUC's Safety and Enforcement Division (SED) prepared a white paper proposing a new requirement for investor owned utilities (IOUs) and publicly owned utilities (POUs) to develop security plans that would identify security risks to their distribution and transmission systems, and propose methods to mitigate those risks. The CPUC hosted a series of workshops to better understand the state of utility physical security protections and to seek input on refining their proposal.

In order to support the CPUC's development of reasonable industry standards for state-level regulations of physical security, the California Municipal Utilities Association (CMUA), which is the statewide trade association for POUs, coordinated with the state's IOUs to develop a comprehensive Straw Proposal¹ (Joint IOU/POU Straw Proposal) for a process to identify at-risk facilities and, if necessary, develop physical security mitigation plans. As a member of CMUA, Roseville staff participated in the development of the Joint IOU/POU Straw Proposal through a CMUA working group as well as through direct meetings with the IOUs. The Joint POU/IOU Straw Proposal set out a guideline for the following: (1) identifying if the utility has any high priority distribution facilities; (2) evaluating the potential risks to those high priority distribution facilities; (3) for determining the distribution facilities where the identified risks are not effectively mitigated through existing resilience/security measures and a process for developing a mitigation plan; (4) a process where a third party reviews the mitigation plans; (5) a document retention policy; (6) a verification process established by the POU governing board; and (7) for information sharing protocols.

SED filed a response² to the Joint IOU/POU Straw Proposal that recommended various modifications and clarifications, including a six step process. Additionally, SED recommended that the utility mitigation plans include: (1) an assessment of supply chain vulnerabilities; (2) training programs for law enforcement and utility staff to improve communication during physical security events; and (3) an assessment of any near-by communication utility infrastructure that supports a distribution substation.

¹ Straw Proposal available at:

https://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/Safety/Risk_Assessment/physicalsecurity/R1506009-Updated%20Joint%20Straw%20Proposal%20and%20Cover%20083117%20Filing.pdf.

² SED Response available at:

https://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/Safety/Risk_Assessment/physicalsecurity/Final%20Staff%20Recommendation%20for%20Commission%20Consideration%20010318.pdf.

In early 2019, the CPUC approved Decision (D.) 19-01-018, which adopted the Joint IOU/POU Straw Proposal as modified by the SED proposal, with additional clarifications and guidance. D.19-01-018 clarified that where there is a conflict between the Straw Proposal and the SED Proposal, then it is the rule in the SED Proposal that controls.³

The POUs generally treat CPUC safety rules for electric utility supply systems as key industry standards. This Utility Security Plan describes Roseville Electric Utility's conformance with the industry standard set by D.19-01-018.

III. PLAN DEVELOPMENT PROCESS

A. PHYSICAL SECURITY PRINCIPLES

The Joint IOU/POU Straw Proposal seeks to support the creation of a risk management approach toward distribution system physical security, with appropriate considerations of resiliency, impact, and cost. In order to accomplish this risk-based approach, the Joint IOU/POU Straw Proposal identifies several principles to guide the development of each individual utility's program. These principles are the following:

1. Distribution systems are not subject to the same physical security risks and associated consequences, including threats of physical attack by terrorists, as the transmission system.
2. Distribution utilities will not be able to eliminate the risk of a physical attack occurring, but certain actions can be taken to reduce the risk or consequences, or both, of a significant attack.
3. A one-size-fits-all standard or rule will not work. Distribution utilities should have the flexibility to address physical security risks in a manner that works best for their systems and unique situations, consistent with a risk management approach.
4. Protecting the distribution system should consider both physical security protection and operational resiliency or redundancy.
5. The focus should not be on all Distribution Substations, but only those that risk dictates would require additional measures.
6. Planning and coordination with the appropriate federal and state regulatory and law enforcement authorities will help prepare for attacks on the electrical distribution system and thereby help reduce or mitigate the potential consequences of such attacks.

³ D.19-01-018 at 43, footnote 58 ("Should there be any question of which shall predominate should there be any incongruity or conflict between a utility or SED RASA recommended rule, the SED RASA rule shall apply.").

B. UTILITY SECURITY PLAN DEVELOPMENT PROCESS

Roseville utilized a multi-step process to develop this Utility Security Plan that is consistent with the Joint IOU/POU Straw Proposal and D.19-01-018. The intent of the proposal is to implement a risk management approach toward distribution system physical security, with appropriate consideration of resiliency, impact, and cost. In order to accomplish this risk-based approach, general principles were derived from information described and evaluated during meetings to guide the utility's overall evaluation of Distribution Facilities. The relevant six steps of that process are the following:

STEP 1: ASSESSMENT/PLAN DEVELOPMENT

Roseville's staff prepared a Draft Utility Security Plan through the process set forth in Steps 1A, 1B, and 1C. Please note the following principles:

- Distribution Facilities will not be able to eliminate the risk of a physical attack occurring, but certain actions can be taken to reduce the risk or consequences of a significant attack.
- Distribution Facilities should have the flexibility to address physical security risks in a manner that works best for their systems and unique situations, consistent with a risk management approach.
- The focus of this assessment is both physical security protection and operational resiliency on the identified critical load facilities (Covered Distribution Facilities) in which additional risk mitigation measures are required.

STEP 1A: IDENTIFY COVERED DISTRIBUTION FACILITIES

Roseville evaluated all distribution-level facilities in its service territory that are subject to its control to determine if any facility met the definition of a "Covered Distribution Facility" pursuant to the factors identified in the Joint IOU/POU Straw Proposal as modified by D.19-01-018.

STEP 1B: PERFORM RISK ASSESSMENT

For every individual "Covered Distribution Facility" identified in the Joint IOU/POU Straw Proposal as modified by D.19-01-018 pursuant to Step 1A, Roseville performed an evaluation of the potential risks associated with a successful physical attack that Covered Distribution Facilities, and whether existing grid resiliency, back-up generation, and/or physical security measures appropriately mitigate identified risks.

STEP 1C: DEVELOP MITIGATION PLAN

If there are any individual Covered Distribution Facilities where the Risk Assessment performed pursuant to Step 1B finds that the existing mitigation and/or resiliency measures do not effectively mitigate the identified risks, then Roseville will develop a Mitigation Plan for that

Covered Distribution Facilities. The Mitigation Plan will use a risk-based approach to select reasonable and cost-effective measures that can either be security focused (e.g., walls or alarms) or resiliency focused (e.g., adequate spare parts).

STEP 2: INDEPENDENT REVIEW

Roseville's Utility Security Plan cycle will contain the identification process, risk assessment, and Mitigation Plan development performed pursuant to Steps 1A, 1B, and 1C. This documentation in combination with the narrative description in Sections IV-VI below will constitute Roseville Electric Utility's Draft Utility Security Plan. Each Draft Utility Security Plan is submitted to a Qualified Third Party for Independent Review. The Qualified Third Party will then issue an evaluation that identifies any potential deficiencies in the Draft Utility Security Plan as well as recommendations for improvements. Roseville will then modify its plan to address any identified deficiencies or recommendations. The combination of the Draft Utility Security Plan, the non-confidential conclusions of the Qualified Third Party, and Roseville's responses to the Qualified Third Party Review will constitute Roseville Electric Utility's Utility Security Plan.

STEP 3: VALIDATION

Roseville will submit its Utility Security Plan to a qualified authority for review. Such entity will provide additional feedback and evaluation of Roseville Electric Utility's Utility Security Plan and, to the extent that this entity is authorized, such entity deems the Utility Security Plan as adequate.

STEP 4: ADOPTION

Roseville's Utility Security Plan will be presented to and adopted by City of Roseville's Council at a public meeting.

STEP 5: MAINTENANCE

Roseville will refine and update the Utility Security on an ongoing basis as appropriate and necessary to preserve plan integrity.

STEP 6: REPEAT PROCESS

Roseville will repeat this six step process at least once every five years or sooner if circumstances dictate.

IV. IDENTIFICATION OF COVERED DISTRIBUTION FACILITY (STEP 1A)

As described in Section III, Step 1A of the Utility Security Plan process involves assessing all distribution-level facilities that are subject to the control of Roseville to determine which facilities are "Covered Distribution Facilities" subject to the need for a risk assessment. This Section describes the factors that Roseville used to evaluate its distribution facilities and the results of its evaluation.

A. IDENTIFICATION FACTORS

The Joint IOU/POU Straw Proposal defines seven screening factors to determine if a facility is a "Covered Distribution Facility." Some factors require additional definitions and/or clarifications in order to be applied to Roseville's facilities. The following Table provides the Joint IOU/POU Straw Proposals Factors as modified/clarified by Roseville.

Factor	Joint IOU/POU Straw Proposal Description	Roseville's Specific Approach*
1	Distribution Facility necessary for crank path, black start or capability essential to the restoration of regional electricity service that are not subject to the California Independent System Operator's (CAISO) operational control and/or subject to North American Electric Reliability Corporation (NERC) Reliability Standard CIP-014-2 or its successors	Roseville reviewed system operations, grid operations, and area planning to identify any crank path or black start essential facilities within Roseville Electric Utility's service territory. As Roseville does not have any black start facilities in the state of California, no loads or facilities meet this criteria.
2	Distribution Facility that is the primary source of electrical service to a military installation essential to national security and/or emergency response services (may include certain airfields, command centers, weapons stations, emergency supply depots)	Roseville reviewed customer and load attributes to identify those specifically critical to national security and/or emergency response services. Roseville potentially identified and included 1 primary source of electrical service.
3	Distribution Facility that serves installations necessary for the provision of regional drinking water supplies and wastewater services (may include certain aqueducts, well fields, groundwater pumps, and treatment plants)	Roseville defines "regional drinking water supplies and wastewater services" to mean a facility providing the primary source of these services to over 40,000 customer accounts or to an area with a population of over 100,000. Based on the approach described above, Roseville identified and included 2 Distribution Facilities with the potential to impact a significant portion of the Roseville community.
4	Distribution Facility that serves a regional public safety establishment (may include County Emergency Operations Centers; county sheriff's department and major city police department headquarters; major state and county fire service headquarters; county jails and state and federal prisons; and 911 dispatch centers)	Roseville defines "regional public safety establishment" as any of the following: (1) a major police or fire department serving 1.5 million population with an least 1000 sworn officers; (2) County Sheriff's Department Headquarters; (3) County Emergency Operations Center; (4) County/State Fire

		headquarters; (5) a California State Prison; (5) a United States Penitentiary; or (6) a Federal Correctional Institute. Roseville identified 1 Distribution Facility that met this requirement.
5	Distribution Facility that serves a major transportation facility (may include International Airport, Mega Seaport, other air traffic control center, and international border crossing)	In addition to the facilities listed in the Joint IOU/POU Straw Proposal, Roseville defines a "major transportation facility" as any transportation facility that has (1) an average of 600 or more flights per day; or (2) 50,000 passengers per day. Roseville identified 1 Distribution Facility that met this requirement.
6	Distribution Facility that serves as a Level 1 Trauma Center as designated by the Office of Statewide Health Planning and Development	Roseville reviewed current listings of Level 1 Trauma Centers and cross referenced with the company's service territory and customer information. No Level 1 Trauma Centers are found to be located within Roseville Electric Utility's service territory.
7	Distribution Facility that serves over 60,000 meters	Roseville identified a Distribution Facility providing electrical service to over 60,000 customers.

Note: The "Roseville's Specific Approach" in the table above was defined by Electric Staff.

B. IDENTIFICATION ANALYSIS

In performing this identification analysis, Roseville is assessing all distribution level facilities that are subject to its exclusive control, or if the facility is jointly owned, the joint ownership agreement identifies Roseville as the entity responsible for operation and maintenance. These specific types of facilities include Distribution Facilities.

Based on this scope, Roseville has identified fifteen Distribution Facilities that are subject to this identification analysis. Of the fifteen Distribution Substations, four fell within one of the covered categories listed above. The Covered Distribution Facility Category Matrix below summarizes this analysis.

Facility ID	1. Crank Path, Black Start	2. Military Installation	3. Regional Drinking Water/ Wastewater Services	4. Regional Public Safety	5. Major Transportation Facility	6. Level 1 Trauma Center	7. Over 60,000 Meters
Facility 1			X		X		
Facility 2			X				
Facility 3				X			
Facility 4							X

Covered Distribution Facility Category Matrix

V. RISK ASSESSMENT (STEP 1B)

A. METHODOLOGY

Pursuant to the process identified in the Joint IOU/POU Straw Proposal and D.19-01-018, Roseville will assess the potential risks associated with a successful physical attack on each of the Covered Distribution Facilities identified in Section IV above. For purpose of this analysis, a physical attack is limited to the following: (1) theft; (2) vandalism; (3) discharge of a firearm; and (4) sabotage. A “successful physical attack” is limited to circumstances where a theft, vandalism, discharge of a firearm, and/or sabotage has directly led to the failure of any elements of the Covered Distribution Facility that are necessary to provide uninterrupted service to the specific load identified in Section IV. While no sabotage related incident has occurred at the facilities in the past, Roseville continues to monitor for sabotage related threats.

In order to perform this risk analysis, Roseville evaluated the relative risk that (1) a physical attack on a Covered Distribution Facility will be successful considering the protective measures in place; or (2) that the impacts of a successful attack will be mitigated due to resiliency and other measures in place.

B. MITIGATION MEASURES

D.19-01-018 identifies the specific mitigation measures that a utility should consider when performing this risk analysis. The following table lists these mitigation measures and provides additional clarifications that are necessary to apply these measures to Roseville's territory.

Measure	D.19-01-018 Description	Additional Clarification
1	The existing system resiliency and/or redundancy solutions (e.g., switching the load to another distribution substation or circuit capable of serving the load, temporary circuit ties, mobile generation and/or storage solutions).	No additional clarification.
2	The availability of spare assets to restore a particular load.	No additional clarification.
3	The existing physical security protections to reasonably address the risk.	No additional clarification.
4	The potential for emergency responders to identify and respond to an attack in a timely manner.	Each facility is evaluated based on a law enforcement officer arriving at the Covered Distribution Facility within 15 minutes of a report from the public of a break in or attack, or of Roseville notifying the law enforcement agency of the triggering of an alarm at the facility.
5	Location and physical surroundings, including proximity to gas pipelines and geographical challenges, and impacts of weather.	Roseville evaluated this element based on the proximity of the Covered Distribution Facility to populated areas and the extent to which the interior of the facility is

		shielded from view due to walls, vegetation, or other visual obstructions.
6	History of criminal activity at the Distribution Facility and in the area.	Roseville evaluated the property crime rates in the immediate vicinity of the Covered Distribution Facility from Roseville Police Department and compared those crimes rates to property crime rates for the county and the state to determine if the area is subject to a higher than average incidence of property related crimes.
7	The availability of other sources of energy to serve the load (e.g., customer owned back-up generation or storage solutions).	No additional clarification.
8	The availability of alternative ways to meet the health, safety, or security.	No additional clarification.
9	Requirements served by the load (e.g., back up command center or water storage facility).	No additional clarification.

Figure 1 below illustrates the causes of a successful physical security attack (Top Event) and Covered Distribution Facility consequences, as well as prevention measures to prevent a physical security attack and control measures that can be employed to mitigate the outcome.

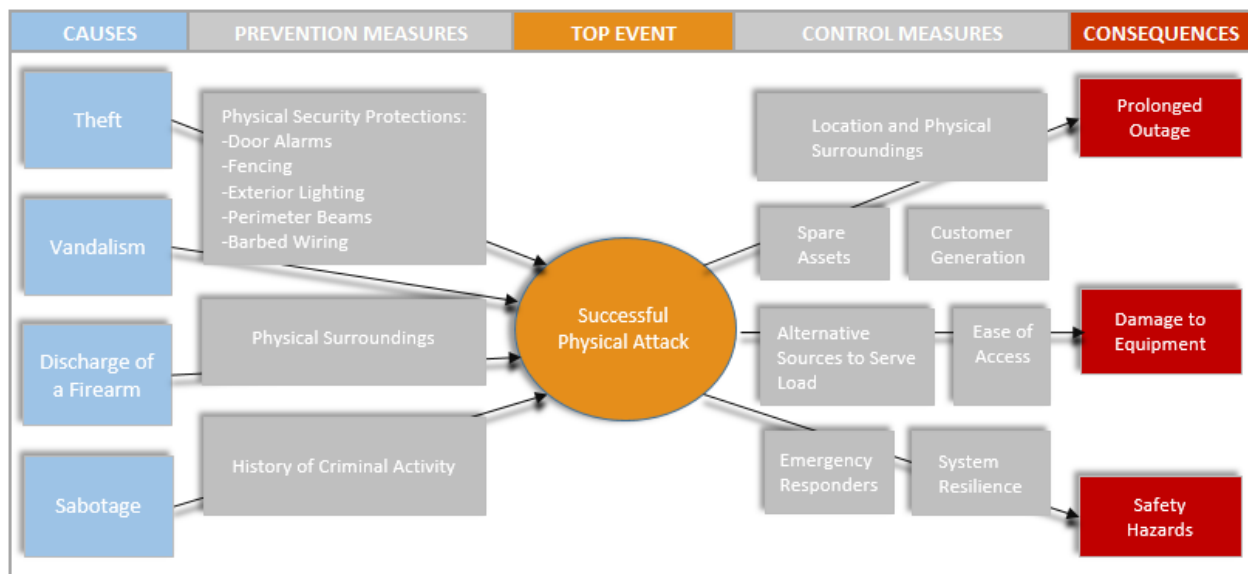


Figure 1: Roseville Bow-Tie Assessment of Covered Distribution Facilities

C. RISK ASSESSMENT

Based on the process described in the Joint IOU/POU Straw Proposal and the direction provided in D.19-01-018, Roseville has determined that of the four Covered Distribution Facilities identified in Section IV, the existing programs and measures in effect at each Covered Distribution Facility effectively mitigate the risks of a physical attack.

All Covered Distribution Facilities are initially designated as high risk given the nature of the proceeding and the assessment of impact through the identification of critical loads. The assessed risk level of each Covered Distribution Facility is then a result of both the presence and the effectiveness of existing prevention and control mitigation measures in place. A greater number of more effective measures reduce the risk level at a greater rate than fewer or less effective measures.

The following section includes the results of applying this methodology to the four Covered Distribution Facilities along with the resulting assessment of each mitigation measure for each Covered Distribution Facility and the assessed risk level.

The following table provides the results of applying this methodology to the four Covered Distribution Facilities and a summary of Roseville's assessment of each mitigation measure for each Covered Distribution Facility.

Mitigation	Facility 1	Facility 2	Facility 3	Facility 4
1. The existing system resiliency and/or redundancy solutions (e.g., switching the load to another substation or circuit capable of serving the load, temporary circuit ties, mobile generation and/or storage solutions).	Fully Effective	Fully Effective	Fully Effective	Fully Effective
2. The availability of spare assets to restore a particular load.	Partly Effective	Partly Effective	Partly Effective	Partly Effective
3. The existing physical security protections to reasonably address the risk.	Partly Effective	Partly Effective	Fully Effective	Partly Effective
4. The potential for emergency responders to identify and respond to an attack in a timely manner.	Fully Effective	Fully Effective	Fully Effective	Fully Effective
5. Location and physical surroundings, including proximity to gas pipelines and geographical challenges, and impacts of weather.	Fully Effective	Fully Effective	Fully Effective	Fully Effective
6. History of criminal activity at the Distribution Facility and in the area.	Fully Effective	Fully Effective	Fully Effective	Fully Effective
7. The availability of other sources of energy to serve the load (e.g., customer owned back-up generation or storage solutions).	Fully Effective	Fully Effective	Fully Effective	Fully Effective
8. The availability of alternative ways to meet the health, safety, or security.	Fully Effective	Fully Effective	Fully Effective	Fully Effective
9. Requirements served by the load (e.g., back up command center or water storage facility).	Fully Effective	Fully Effective	Fully Effective	Fully Effective

As identified above, the four identified Covered Distribution Facilities have existing mitigating measures sufficient to effectively mitigate the identified risks of a physical attack. These facilities are discussed in Section VI.

VI. COVERED DISTRIBUTION FACILITY MITIGATION PLANS (STEP 1C)

Pursuant to the process identified in the Joint IOU/POU Straw Proposal and D.19-01-018, Roseville has determined that for the four Covered Distribution Facilities that are subject to Roseville's control, the existing and planned mitigation measures effectively reduce the risk of a physical security attack to a from medium to low/very low risk. This section describes the existing Mitigation Plan that Roseville utilizes for the four Covered Distribution Facilities.

In order to perform this risk analysis, Roseville evaluated the relative risk that (1) a physical attack on a Covered Distribution Facility would be successful considering the protective measures in place; or (2) that the impacts of a successful attack would be mitigated due to resiliency and other measures in place. Throughout the below analysis Roseville determined that the physical security risks for the identified Covered Distribution Facilities are low with Roseville's existing resiliency, security measures, and planned mitigation efforts.

1. System resilience: The vast majority of Roseville's system has been designed to handle the anticipated loss of service to a major component (transformer, 60kv line, 12kv feeder etc.). Once Roseville reaches the individual customer level, loss of a pad mount transformer or service drop would require the repair/replacement prior to having the power restored.
2. Spare assets: Roseville's system has been designed to accommodate the loss of any one of the identified Covered Distribution Facilities (via switching on Roseville's distribution system). Other components such as wire, cable, distribution switches, pad mount transformers, and wood pole replacements are readily available in stock, with the exception of metal switchgear.

Roseville performs detailed contingency analysis on the loss of a substation transformer biennially. This analysis is performed using distribution load flow software and takes into account updated load forecasts. Detailed switching schedules have been prepared for the loss of every substation transformer. While Roseville operates a radial distribution system, all circuits are looped (with normal open points) and mitigation of the loss of a transformer can be accommodated by using the excess capacity on other substation transformers and 12kV circuits.

3. Existing physical security protections: Includes door alarms, brick and wire fencing, exterior lighting, barbed wire, and perimeter beams. Note that door alarms, perimeter beams, and exterior gate contacts are monitored through the Roseville SCADA system.
4. Emergency responders to respond to occurrence: The Covered Distribution Facilities were not built with the express purpose of emergency responder access however, all are

within the City limits, and most are adjacent to roadways and have reasonable access for the Roseville Police Department and Roseville Fire Department emergency response crews. Important to note that City of Roseville is a full service city with its own fire and police departments.

5. Location and physical surroundings, including proximity to gas pipelines and geographical challenges, and impacts of weather: The above mentioned Covered Distribution Facilities are located in an urban area and all are within the City of Roseville limits. No major gas transportation pipelines are close to the Covered Distribution Facilities.
6. History of criminal activity at the Covered Distribution Facilities and in the area: Graffiti happens infrequently (not typical) and addressed during monthly routine inspections as needed (if graffiti is detected it is addressed within two days). Roseville has had one theft at Facility 2 (loss of a portable propane tank) in 2018.
7. The availability of other sources of energy to serve the load (e.g., customer owned back-up generation or storage solutions): Roseville has evaluated the potential for customer owned generation at each critical load as a part of this assessment. All identified critical load entities maintain backup generation in the event that a successful physical attack occurs on the Covered Distribution Facilities and in the highly unlikely event that secondary sources are not available. The backups are tested on a yearly basis to ensure they are working if they are called upon. City owned critical facilities are evaluated on an annual basis to ensure backup generation is reliable and available.
8. The availability of alternative ways to meet the health, safety, or security: Roseville's existing resilience, backup generation, and availability of secondary sources to feed the load provide multiple options to meet health, safety, and security. At this time, Roseville is not formally considering providing alternate ways to meet the needs served by the critical loads as these needs are fully covered currently.
9. Requirements served by the load: The critical loads have backup generation available and are able to be fed by secondary sources. As a result it was determined that the load requirements would be met through alternative means as discussed in this section.

A. COVERED DISTRIBUTION FACILITY MITIGATION PLAN

Roseville operates the electric grid with the lowest level of risk reasonably attainable. After an extensive review of Roseville's existing methodology, it was determined that the risk level for the four Covered Distribution Facilities was slightly below medium. The Facility Mitigation Plan will increase the physical security measures by December 31, 2022. Roseville will also develop a utility-wide physical security plan that will create a more holistic approach to Facility security. Roseville takes an active approach to both physical security and system resilience, thus proactively reducing potential risks, as shown in Figure 2 & 3 below.

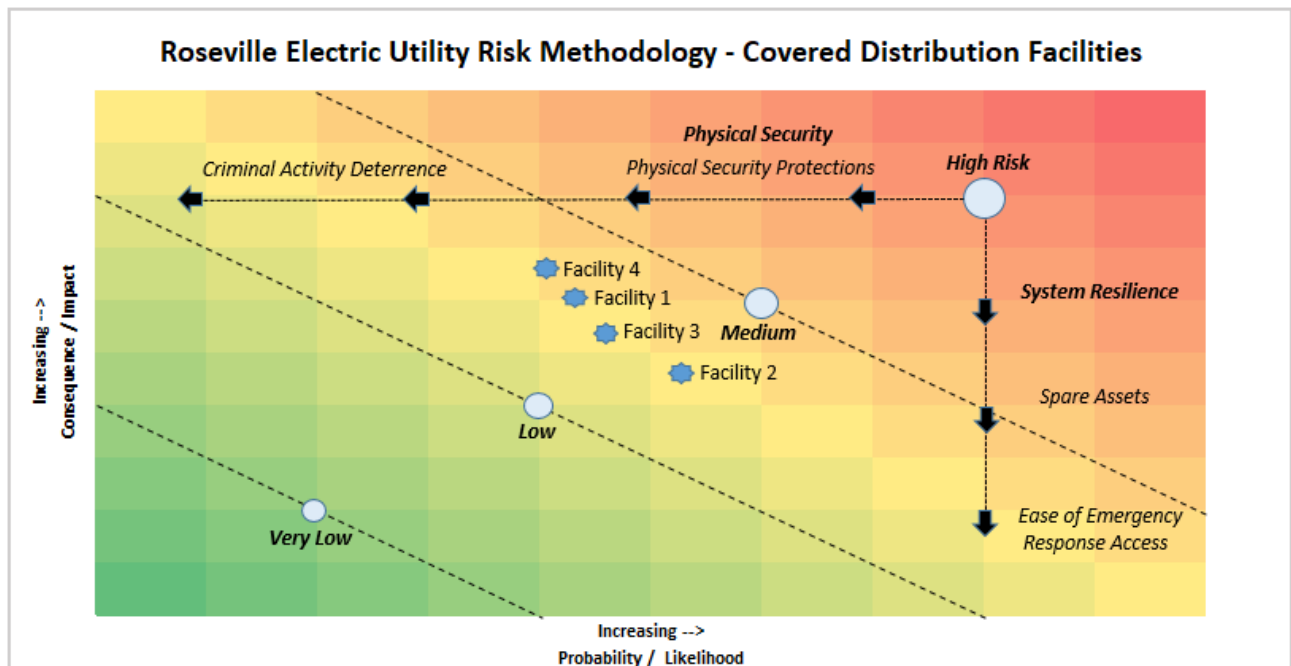


Figure 2: Roseville Risk Methodology Baseline Prior to Assessment

The heat map above indicates the baseline risk prior to existing physical and resilience measures that Roseville has in place or is in the active process of implementing based on the analysis performed during the assessment.

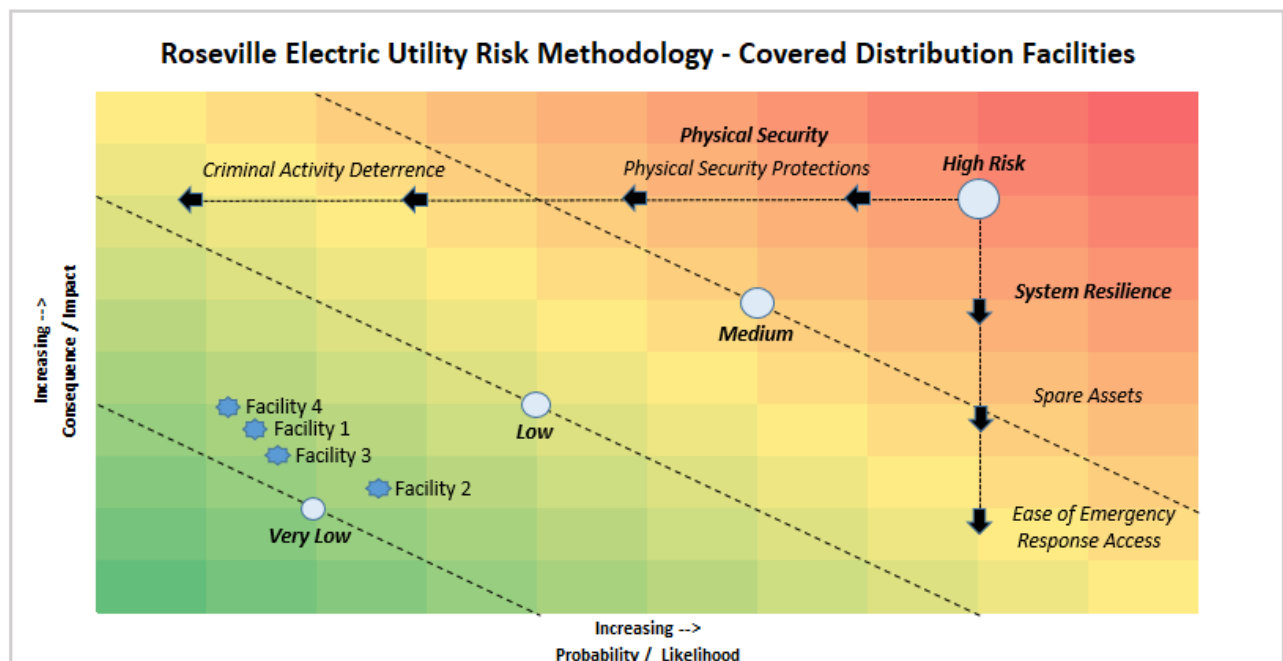


Figure 3: Roseville Risk Methodology Post Mitigation Measures

The post mitigation heat map above illustrates Roseville's four Covered Distribution Facilities risk exposure moving to the low/very low quadrant due to existing and planned physical and resilience measures. Roseville will continue to identify and assess potential risks associated with Covered Distribution Facilities and apply the methodologies described in this document consistent with D.19-01-018.

Roseville also considered the emerging threats below that after current evaluation considered them to be low risk:

- Insider threats: Roseville has a documented process that includes performing Personal Risk Assessments (PRA) during the hiring process to identify any potential past issues with the perspective employee being considered for employment. Roseville also has a documented process to remove the employee's physical and network access when they are no longer employed by Roseville.
- Unmanned aerial vehicles (UAVs): Roseville monitors and evaluates these emerging industry trends. UAV activity near the Covered Distribution Facilities was determined to be very low at this time.
- Supply chain risk: Should the Roseville supply chain become unavailable, Roseville would address this through spare assets on hand or request needed materials through the use of existing mutual aid agreements with neighboring utilities.

VII. INDEPENDENT EVALUATION AND RESPONSE (STEP 2)

A. REQUIREMENTS FOR QUALIFIED THIRD PARTY REVIEW

D.19-01-018 specifies the following criteria for a Qualified Third Party:

Independence: A Qualified Third Party cannot be a division of the POU. A governmental entity can select as the third-party reviewer another governmental entity within the same political subdivision, so long as the entity has the appropriate expertise, and is not a division of the POU that operates as a functional unit, i.e., a municipality could use its police department as its third-party reviewer if it has the appropriate expertise.

Adequate Qualifications: A Qualified Third Party must be an entity or organization with electric industry physical security experience and whose review staff has appropriate physical security expertise, which means that it meets one of the following: (1) an entity with at least one member who holds either an ASIS International Certified Protection Professional (CPP) or Physical Security Professional (PSP) certification; (2) an entity or organization with demonstrated law enforcement, government, or military physical security expertise; or (3) an entity or organization approved to do physical security assessments by the CPUC, Electric Reliability Organization, or similar electrical industry regulatory body.

B. IDENTIFICATION OF THIRD PARTY REVIEWER

Roseville has selected as its Third Party Reviewer AESI-US, Inc. (AESI). AESI is an independent third party and not a part of the City of Roseville. AESI meets the second qualification criterion above, "an entity or organization with demonstrated law enforcement, government, or military physical security expertise."

C. PUBLIC RESULTS OF THIRD PARTY EVALUATION

AESI has reviewed the Roseville's Physical Security Plan pursuant to the California Public Utilities Commission's ("CPUC") Phase 1 Decision on Order Instituting Rulemaking Regarding the Physical Security of Electrical Corporations, dated January 10, 2019, which requires electric utilities to identify electric distribution assets that may merit special protection and measures to lessen identified risks and threats.

AESI made several recommendations to improve current physical security measures. The recommended changes are not a requirement but best industry practices.

D. ROSEVILLE ELECTRIC UTILITY RESPONSE

Roseville will implement the recommended physical security enhancements at the identified Covered Distribution Facilities by December 31, 2022. Currently Roseville has separate physical security plans for different sections of the organization. Roseville will work towards completing a holistic department wide physical security plan that would combine existing measures.

VIII. VALIDATION (STEP 3)

A. SELECTION OF QUALIFIED AUTHORITY

Roseville selected the Roseville Police Department as its Qualified Authority to conduct the validation step of the physical security as required. Roseville's Police Department is a separate department from the utility, therefore they are independent in their validation review. Employees from the Roseville Police Department have been through extensive training focusing on physical security of electric substations in the last five years. Roseville feels that the Roseville Police Department is the perfect entity to validate Roseville's Physical Security Plan and measures.

B. RESULTS OF QUALIFIED AUTHORITY REVIEW

The Roseville Police Department reviewed and determined that current measures are adequate based on the mitigation plan and the fact that local crimes are not targeting the Covered Distribution Facilities.

C. ROSEVILLE ELECTRIC UTILITY RESPONSE TO QUALIFIED AUTHORITY REVIEW

Roseville continues to work with the Roseville Police Department to improve and enhance physical security measures.

IX. NARRATIVE DESCRIPTIONS FOR UTILITY SECURITY PLAN

A. ASSET MANAGEMENT PROGRAM

Roseville utilizes a Computer Maintenance Management System (CMMS) for asset and inventory management. This software is an enterprise asset management solution (equipment, installations, buildings, etc.) and includes services such as purchasing, inventory, location management, service desk, and work planning.

This CMMS software tracks the majority of items in Roseville's warehouses. The software is used to:

- track when inventory falls below "safety-stock" reorder points
- perform cycle counts and make appropriate adjustments
- create purchase requisitions and purchase orders to restock needed items
- capture transactions such as receipts, issues, transfers and returns

The utilization of an inventory management program optimizes service levels by tracking each item's location, number in stock and how many are available. CMMS manages Roseville's field assets as well. Roseville uses time based scheduling for maintenance planning and inspections. Workforce mapping and asset visualization is accomplished through the CMMS's geospatial connection to Roseville's Geographic Information System (GIS). Work orders are created and closed in the field on mobile devices which help to streamline the process.

B. WORKFORCE TRAINING AND RETENTION

Roseville staff are highly trained in all aspects of infrastructure operations at all four Covered Distribution Facilities. Personnel are available via call back in the event of an emergency and/or to initiate repairs utilizing Roseville's spare part inventory. Finally, Roseville is aware that retention of employees with these skill sets are a necessity and continues to work on maintaining a positive work environment.

C. PREVENTATIVE MAINTENANCE PLAN

Roseville has a Standard Operating Procedure as a documented preventative maintenance plan for identified equipment (PRC-005-6) to ensure that mitigation measures are functional and performing adequately. It establishes procedures for analyzing, mitigating, and providing documentation regarding failures and corrective action plans internally. It also establishes standard procedures for reporting protection system failures and misoperation.

Roseville performs preventative maintenance on a scheduled basis on all distribution facility assets, such as: breakers, switch gear, substation transformers, and physical security systems.

Roseville utilizes a maintenance program for substation inspections. The objective of this program is to establish a standard for utility operations use pertaining to type, frequency and grading of the City's electric utility substation activities.

Additionally, the Covered Distribution Facilities use a Computer Maintenance Management System (CMMS) to track and schedule maintenance activities. CMMS is a software package that maintains a computer database of information about Roseville's maintenance operations.

D. PHYSICAL SECURITY EVENT TRAINING

The City of Roseville has an Emergency Management Team (EMT) that meets regularly and has representatives from each City department as part of the team. The EMT works to ensure that the City of Roseville is prepared to respond to disasters that may occur within the City. The City Manager acts as the Emergency Services Director. The Director works closely with city staff during a disaster; while the day-to-day operation of disaster preparedness and readiness lies with the Emergency Preparedness Manager, a Roseville Fire Department Battalion Chief.

The City of Roseville is a member of the California Utility Emergency Association (CUEA), which plays a key role in ensuring communications between utilities during emergencies. CUEA serves as a point-of-contact for critical infrastructure utilities, CalOES and other governmental agencies before, during and after an event.

Roseville has worked with local law enforcement on the four Covered Distribution Facilities to educate them on physical hazards, points of entry and protection. Roseville and local law enforcement participate semiannually with the City's EMT on Emergency Operations Center scenarios, further increasing communication between agencies. Roseville also belongs to the Electricity Information Sharing and Analysis Center (E-ISAC) which is a trusted source of quality analysis and rapid sharing of security information for the electric industry.