

REDACTED

AES Response and Corrective Action

CPUC AUDIT FINDINGS OF Rexford Solar and Battery Energy Storage System March 23-26, 2026

I. Findings Requiring Corrective Action

Finding 1: Missing locks on [REDACTED] containers in the BESS yard

General Order (GO) 167-C, Appendix D, Operational Standard (OS) 21: Plant Security states:

“To ensure safe and continued operations, each GAO or ESSO provides a prudent level of security for the facility, its personnel, operating information, communications, and stepping up security measures when necessary.”

The Rexford Solar and Battery Energy Storage System (Plant) does not consistently lock [REDACTED] battery energy storage system (BESS) containers. While some [REDACTED] units had locks, the Electric Safety and Reliability Branch (ESRB) Inspectors identified several containers in the field were missing locks on one or more of the doors. The container locks provide a crucial level of physical security that improves the safety of the site. Figure 1 shows a BESS container that has a lock on one section of the BESS, but another section has the lock missing and Figure 2 shows a BESS Container without locks on any of the doors. ESRB inspectors discussed the missing locks [REDACTED]

[REDACTED]

[REDACTED]

The Plant must improve the physical security of the site by installing locks as required by the OEM on all BESS containers.

Corrective Action Plan:

AES coordinated directly with BESS Supplier to perform a full assessment of lock requirements across all BESS containers and initiated procurement of OEM-compliant replacement locks. The BESS Supplier completed procurement of all required locks, which were delivered during the week of June 29, 2026. Following receipt, the BESS Supplier's field services team will execute installation across all affected enclosures, restoring full compliance with OEM design requirements and plant security expectations, target date of completion is by July 30, 2026.

AES will perform field verification to confirm all container doors are secured and will document completion under SAP Work Order 2003425102.

Finding 2: Unreported Safety Incidents

GO 167-C, Section 9.4 Safety Related Incident states in part:

"Within 24 hours of its occurrence, a GAO or ESSO shall report to the Commission's emergency reporting website any safety-related incident involving a GA or ESS. If internet access is unavailable, the GAO or ESSO may report using the backup telephone system. Such reporting shall include any incident that has resulted in death to a person; an injury or illness to a person requiring overnight hospitalization; a report to Cal/OSHA, OSHA, or other regulatory agency; or damage to the property of the GAO or ESSO or another person of more than \$200,000, or involves a GA or ESS malfunction or failure resulting in fires, explosions, hazardous emissions, or safety related reports to other agencies."

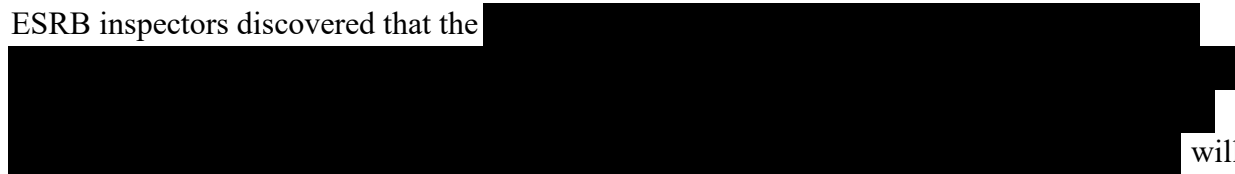
GO 167-C, Appendix C, Maintenance Standard (MS) 16: Regulatory Requirements states:

"Regulatory compliance is paramount in the operation of the facility. Each regulatory event is properly identified, reported and appropriate action is taken to prevent recurrence."

GO 167-C, Appendix D, OS 2: Organizational Structure and Responsibilities states:

"The organization with responsibility and accountability for establishing and implementing an operation strategy to support company objectives for reliable facility operation is clearly defined, communicated, understood, and is effectively implemented. Reporting relationships, control of resources, and individual authorities support, are clearly defined, and commensurate with responsibilities."

ESRB inspectors discovered that the

 will exceed the monetary cost criteria for the 24-hour reporting requirement in *GO 167-C Section 9.4 Safety Related Incidents*. The incident occurred on February 13, 2026, and the Plant had not reported it as of March 23, 2026. ESRB inspectors became aware of the incident during the

audit on March 23, 2026.

Separately, as part of ESRB's initial document request, the Plant provided a root cause analysis (RCA) report performed by the Plant's inverter manufacturer, [REDACTED], for a fault on inverter #38. Images in that RCA report revealed that soot covered most of the affected components because of the incident, indicating a fire. The incident meets the reporting criteria in *GO 167-C Section 9.4*, and the site did not report it to the CPUC. The event shall be reported through the Commission's emergency reporting website¹.

The Plant must report all safety related incidents that meet the reportable incident criteria of *GO 167-C Section 9.4* and ensure all O&M personnel are aware of this requirement.

Corrective Action Plan:

AES completed retroactive reporting of the BESS suppression discharge event to the CPUC on March 25, 2026. Additionally, AES submitted a formal response to CPUC Data Request GE20260325 on May 8, 2026 via Kiteworks, providing detailed documentation of the event, associated impacts, and corrective actions taken.

*For the Inverter #38 event, AES conducted a detailed root cause analysis to evaluate the failure mechanism and equipment condition. The analysis determined that the event was driven by a loose or disconnected capacitor cable, which resulted in internal inverter fault conditions and subsequent soot contamination across internal components without widespread structural damage. This Root Cause Analysis Report supports the technical evaluation of the event and is provided in **attachment Finding #2**.*

*AES implemented process improvements to ensure timely identification, classification, and reporting of all safety-related incidents going forward. These improvements include establishing clearly defined reporting thresholds, formal escalation protocols, and alignment of responsibilities across Site Operations, Asset Management, and the ROCC to ensure compliance with the 24-hour reporting requirement under *GO 167-C* standards.*

AES will conduct compliance training for Field Services personnel, Asset Management, and ROCC teams to reinforce safety incident reporting requirements and event classification criteria. This training is scheduled for July 2026 and incorporated into ongoing compliance programs to ensure sustained adherence to regulatory obligations. Target completion date is July 30, 2026.

Finding 3: Spill Prevention, Control, and Countermeasure (SPCC) program gaps—Medium Voltage Transformers (MVT) in [REDACTED] not included in monthly reports

GO 167-C, Appendix D, OS 7: Operation Procedures and Documentation states:

“Operation step wise procedures exist for critical systems and the states of those systems are necessary for the operation of the unit including startup, shutdown, charging, discharging, normal operation, failure detection, alarm response, reasonably anticipated abnormal and emergency conditions, and restoration. Operation procedures and documents are clear and technically accurate, provide appropriate directions, and are used to support safe and reliable facility operation. Procedures are current to the actual methods being employed to accomplish the task and are comprehensive to ensure reliable energy delivery to the transmission grid. Procedure shall be reviewed annually to ensure current procedures are up-to-date and OEM recommendations are implemented”

GO 167-C, Appendix D, OS 10: Environmental Regulatory Requirements states:

“Environmental regulatory compliance is paramount in the operation of the facility. Each regulatory event is identified, reported and appropriate action taken to prevent recurrence.”

GO 167-C, Appendix D, OS 13: Routine Inspections states:

“Routine inspections by facility personnel ensure that all areas and critical parameters of facility operations are continually monitored, equipment is operating normally, and that routine maintenance is being performed. Results of data collection and monitoring of parameters during routine inspections are utilized to identify and resolve problems, to improve facility operations, and to identify the need for maintenance. All personnel are trained in the routine inspection procedures relevant to their responsibilities. Among other things, each GAO or ESSO creates, maintains, and implements routine inspections by:

40 Code of Federal Regulations (CFR) Part 112.7 General requirements for Spill Prevention, Control, and Countermeasure Plans states in part:

“(e) Inspections, tests, and records. Conduct inspections and tests required by this part in accordance with written procedures that you or the certifying engineer develop for the facility. You must keep these written procedures and a record of the inspections and tests, signed by the appropriate supervisor or inspector, with the SPCC Plan for a period of three years. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph.”

ESRB Inspectors discovered that MVTs in the [REDACTED] were not included in monthly inspections as required by the Plant’s SPCC. In the Pre-Audit Data Request, the Plant submitted a SPCC Plan prepared [REDACTED] in June 2025, which identified all the transformers present on site, including those located in the [REDACTED] in *Table 8.1 Equipment Identification*, as shown in Figure 4. In the SPCC Plan, *Section 10.3 Inspections, Tests, and Records* specifies that “Monthly inspections will be conducted and will be kept on site or at the same facility the SPCC Plan is stored and available”; however, the Plant was unable to provide records of the

MVTs in the [REDACTED] because it was being performed by their contractor every six months. The contractor was also unable to provide monthly inspections as prescribed by the SPCC Plan.

The Plant must ensure it is compliant with all aspects of 40 CFR Part 112 by following an SPCC Plan that addresses all relevant transformers at the site. The SPCC inspections must include the MVTs in the [REDACTED] and suitable records must be maintained according to the SPCC plan. The Plant must submit an updated SPCC that includes the MVTs in the [REDACTED] and the document or method that will be used to record those inspections.

Corrective Action Plan:

*AES updated the SPCC inspection program to explicitly include all MVT assets within the BESS yard as part of the monthly inspection scope. Monthly inspections now include all oil-filled operational equipment, including MVTs in the BESS yard, and the SPCC Plan has been reviewed and validated to confirm these assets are within the defined inspection scope (see **attachment Finding #3**). Inspection checklists and documentation practices have been revised to ensure all applicable oil-containing equipment is consistently captured and evaluated during each inspection cycle.*

AES attached an updated SPCC program layout and inspection methodology to ESRB, detailing how MVT assets are incorporated into the inspection program, including scope, frequency, and documentation practices.

AES reinforced recordkeeping requirements to ensure SPCC inspection records are stored in the Sitedocs.

Finding 4: Substation safety controls—missing lead-acid battery signage and outdated first-aid kit contents

GO 167-C, Appendix C, Maintenance Standard (MS) 1: Safety states:

“The protection of life and limb for the work force is paramount. The company behavior ensures that individuals at all levels of the organization consider safety as the overriding priority. This is manifested in decisions and actions based on this priority. The work environment, and the policies and procedures foster such a safety culture, and the attitudes and behaviors of individuals are consistent with the policies and procedures.”

GO 167-C, Appendix D, OS 8: Plant Status and Configuration states:

“Facility activities are effectively managed, so the facility status and configuration are maintained to support safe, reliable, and efficient operation.”

Guidelines to Standard 8: Plant Status and Configuration state in part:

“A. Plant Status Control

10. Procedures are implemented to control the placement of caution, warning, information and other similar tags on plant equipment and operator aids in the plant.”

ESRB Inspectors identified missing required signage indicating the presence of lead-acid

batteries on the substation building as shown in Figure 5 and Figure 6. Additionally, ESRB inspectors found expired antiseptic pads and burn cream in the first-aid kit inside the substation building, shown in Figure 7.

As a corrective action, the Plant must install an appropriate warning sign identifying lead-acid batteries within the substation building. This serves as a warning for staff and first responders that hazards such as acid and hydrogen gas are present. The Plant must also restock its first-aid cabinets and implement a system to ensure materials are re-stocked before they expire.

Corrective Action Plan:

*AES installed external warning signage identifying lead-acid battery hazards on the substation access doors (see **attachment Finding #4.1**).*

*AES evaluated the site's first-aid provisions and determined that the first-aid cabinet was not required for this location. The cabinet along with expired materials were removed from service (see attachment **Finding #4.2**)*

Finding 5: Vegetation management must be improved.

General Order (GO) 167-C, Appendix C, MS 1: Safety states in part:

“The protection of life and limb for the work force is paramount. The company behavior ensures that individuals at all levels of the organization consider safety as the overriding priority. This is manifested in decisions and actions based on this priority. The work environment, and the policies and procedures foster such a safety culture, and the attitudes and behaviors of individuals are consistent with the policies and procedures.”

GO 167-C, Appendix C, MS 4: Problem Resolution and Continuing Improvement states:

“The company values and fosters an environment of continuous improvement, timely and effective problem resolution, and problem prevention. This can be accomplished by applying industry best practices, lessons learned, and proven safety measures for the safety and reliability of both the GA and ESS.”

GO 167-C, Appendix C, MS 11: Facility Status and Configuration states:

“Station activities are effectively managed, so facility status and configuration are maintained to support safe, reliable, and efficient operation.”

ESRB Inspectors identified inadequate vegetation management in multiple areas of the facility. Overgrown vegetation was discovered within the substation, including weeds and grasses in proximity to energized equipment and conductors shown in Figure 8. ESRB Inspectors also found high vegetation throughout the solar array area, including beneath PV modules and around associated equipment shown in Figure 9 and Figure 10.

ESRB Inspectors observed active vegetation mitigation efforts underway, including mowing activities and sheep grazing as shown in Figure 11. However, the vegetation levels present at the time of inspection indicate that the current approach remains insufficient to control vegetation

growth to a level consistent with safe and reliable operation.

Vegetation inside the substation increases the potential for electrical faults, fire ignition, and hazards to personnel. Excessive vegetation within the solar array area creates additional fire hazards, impedes visibility and access during inspections, and may contribute to operational or reliability risks.

The Plant must evaluate and enhance its vegetation management program to ensure effective and timely control of vegetation within the substation and throughout the solar array area. The improved program must:

1. Increase the frequency, coverage, and effectiveness of vegetation mitigation activities.
2. Prioritize critical areas where vegetation poses a direct safety or reliability risk.
3. Include controls or methods that prevent vegetation from reaching hazardous levels between mitigation cycles.

If environmental restrictions limit certain vegetation control activities, the Plant must coordinate with the appropriate regulatory agencies to identify alternative mitigation methods that support fire prevention while complying with environmental regulations.

As part of the corrective action plan submitted to ESRB, the Plant must provide a comprehensive plan outlining how vegetation management practices will be improved and how ongoing compliance will be ensured.

Corrective Action Plan:

*AES enhanced vegetation management activities across the facility, including increased frequency of mowing, targeted weed abatement, and expanded grazing operations. Please see the completed vegetation management site pictures **in Finding # 5.2 for reference.***

*AES established a vegetation mitigation plan to ensure improved growth monitoring. The field operations team is required to monitor vegetation conditions and initiate corrective actions prior to exceeding defined limits. Please **see the attachment Finding #5.1 for reference.***

Finding 6: Deficiencies in the Plant’s Emergency Response Plan, and safety orientation and evacuation materials and procedures

GO 167-C, Appendix C, MS 1: Safety states:

“The protection of life and limb for the work force is paramount. The company behavior ensures that individuals at all levels of the organization consider safety as the overriding priority. This is manifested in decisions and actions based on this priority. The work environment, and the policies and procedures foster such a safety culture, and the attitudes and behaviors of individuals are consistent with the policies and procedures.”

GO 167-C, Appendix C, MS 4: Safety states:

“The company values and fosters an environment of continuous improvement, timely and effective problem resolution, and problem prevention. This can be accomplished by applying industry best practices, lessons learned, and proven safety measures for the safety and reliability of both the GA and ESS.”

GO 167-C, Appendix C, MS 11: Facility Status and Configuration states:

“Station activities are effectively managed, so facility status and configuration are maintained to support safe, reliable, and efficient operation.”

ESRB Inspectors reviewed the Plant’s Emergency Response Plan (ERP), orientation materials, and evacuation procedures and were unable to identify muster points and evacuation routes in the evacuation map and training materials.

Specifically, ESRB Inspectors found that the ERP and orientation materials did not include a comprehensive site overview map clearly showing the layout of the solar fields, [REDACTED], access routes, and major facility areas. The overview map and supporting visual information also lacked zoomed-in depictions of individual field areas with clearly marked muster points. In addition, ESRB Inspectors observed no evacuation map posted in the Operations and Maintenance (O&M) building, where personnel and visitors would reasonably expect to locate emergency information.

The safety orientation presentation provided to ESRB Inspectors did not include sufficient information about the [REDACTED], its associated hazards, and emergency considerations. A baseline level of site-wide hazard awareness is necessary to ensure that all personnel and visitors entering the facility understand the risks associated with the BESS area.

Clear, complete evacuation mapping and sufficient hazard awareness training are necessary to ensure that all workers and visitors can quickly identify muster points, understand BESS-related risks, and follow proper procedures during an emergency.

To address these deficiencies, the Plant must update its ERP and orientation materials to include:

1. A full-site overview map showing the solar field layout, the [REDACTED], access routes, and all key facility areas.
2. Zoomed-in maps of each solar field with clearly identified muster points and evacuation

routes.

3. A general overview of the [REDACTED], associated hazards, and key emergency considerations to ensure that all personnel entering the site have baseline BESS awareness, even when third-party entities conduct more detailed training.

The Plant must also post evacuation maps in the O&M building in an accessible and visible location.

As part of the corrective action plan submitted to ESRB, the Plant must provide updated evacuation maps and orientation materials, along with documentation demonstrating where and how these materials will be posted, incorporated into trainings, and maintained going forward.

Corrective Action Plan:

AES updated the Rexford Solar Emergency Response and Communication Plan (ERCP) (attachment Finding #6.1) and Site Contractor/Visitor Orientation (Finding #6.2) materials to include clearly defined muster points across all areas of the site, as well as updated evacuation routes that provide clear and direct paths of travel to designated muster locations. Please see attached map in Finding # 6.3.

AES included general overview of the [REDACTED], associated hazards, and key emergency conditions in the safety orientation training materials. These training materials will be provided to third party entities and contractors' employees.

Finding 7: The Plant exhibits poor housekeeping that affects site safety and access

GO 167-C, Appendix D, OS 11: Operations Facilities, Tools, and Equipment states:

"Facilities and equipment are adequate to effectively support operations activities, including housekeeping, tool storage, and equipment storage. Physical separation such as, but not limited to, egress requirements, clearance for electrical equipment, and ESS equipment shall be maintained."

GO 167-C, Appendix C, MS 3: Maintenance Management and Leadership states:

"Maintenance managers establish high standards of performance and align the maintenance organization to effectively implement and control maintenance activities."

GO 167-C, Appendix C, MS 9: Conduct of Maintenance states:

"Maintenance is conducted in an effective and efficient manner, so equipment performance and material condition effectively support reliable facility operation."

ESRB Inspectors identified several examples of poor housekeeping throughout the site including:

1. Excessive number of photovoltaic panels were left unattended on pallets in several locations throughout the Plant, including in the remote array areas, as shown in Figure

- 12.
2. A temporary tracker control cable left in place across an access road, as shown in Figure 13.
3. A spool of wire left adjacent to an inverter, blocking access to electrical panels, as shown in Figure 14. Access panels should be kept clear of obstructions to provide access and reduce the impact of an incident on the inverter.
4. An inverter screen left open and exposed to the elements, as shown in Figure 15.
5. Missing screws on several inverters, as shown in Figure 16.

Good housekeeping practices reduce safety risks, improve reliability of stored equipment, and improve site security for remote areas of the Plant. Unattended and visible equipment creates risks for site security and reliability for spare equipment, especially in unmanned, remote sections of the Plant. Good cable management reduces the probability that cables will be damaged by vehicles or wildlife, improving the reliability of the Plant. Additionally, failing to reinstall maintenance screws after servicing electrical enclosures compromises the seal and can allow dust, water, and contaminants to enter, preventing the equipment from maintaining its National Electrical Manufacturers Association (NEMA) rating. The Plant must set high standards of performance and improve general housekeeping throughout the site and its remote solar arrays to improve safety and reliability.

Corrective Action Plan: (See Finding #7)

1. *Unattended photovoltaic panels on pallets were removed and stored in containers at the lay down area at Rexford site near OEM building.*
2. *A temporary tracker control cable left in place across an access road was removed and replaced permanently by the EPC contractor under warranty.*
3. *A spool of wire left adjacent to an inverter, blocking access to electrical panels was removed and stored in the Rexford site lay down area.*
4. *All open inverters' screens were closed and inspected.*

Additionally, AES will continue to maintain good housekeeping inspections constantly throughout the site and remote PV sites which will improve the reliability of the site operations.

Finding 8: Work-order documentation inconsistent in detail and process

GO 167-C Appendix A, Generating Asset and Energy Storage System Logbook Standards Exceptions states in part:

“In lieu of logging outstanding maintenance activities, a work order management system or electronic database system may be utilized at the discretion of the GAO or ESSO to

track maintenance activities and status. This method of recordkeeping is intended to keep track of maintenance records according to maintenance requirements of original equipment manufacturers or industry best practices. Information in the work order management shall include the following but is not limited to:

- *Equipment issue;*
- *Work order tracking number;*
- *Date and time the work order was issued and completed;*
- *Names of persons who created, approved work orders and performed the work;*
- *Maintenance requirement (e.g., OEM recommendation, Non-Destructive Examination, Post heat treatment, etc.);*
- *Maintenance activities performed;*
- *Parts and tools information;*
- *Job safety and environmental analysis information;*
- *Permit information such as hot work, confined space entry, etc.”*

GO 167-C, Appendix C, MS 3: Maintenance Management and Leadership states:

“Maintenance managers establish high standards of performance and align the maintenance organization to effectively implement and control maintenance activities.”

ESRB Inspectors identified several completed work orders (WO) that were missing critical details when reviewing the Systems Applications and Products (SAP) program that is used as a computerized maintenance management system (CMMS) by the Plant. While some WOs had detailed descriptions and comments, others were left entirely blank. Specifically, ESRB Inspectors identified the following WOs with insufficient details and information.

- a) Work Order 2003279960: RXFD Site Comms Issue – Full Site Outage
- b) Work Order 2003281907: RXFD Site Break In – PB 83

ESRB Inspectors noted that more recent WOs contained more information. The Plant must continue this trend and consistently provide complete and accurate details in SAP when WOs are completed and closed out.

Corrective Action Plan:

*AES will provide training to employees to input mandatory information within the SAP CMMS prior to work order closure. These controls ensure that each work order contains complete documentation, including detailed descriptions of issues encountered, corrective actions performed, and timestamps for creation and closure activities (**See Finding #8**). Target Date for completion is July 31, 2026.*

AES leadership team will review the completed work orders for accuracy.

Finding 9: Confined spaces not fully listed; water tanks missing confined-space labels

GO 167-C, Appendix D, OS 1: Safety states:

“The protection of life and limb for the work force is paramount. GAOs and ESSOs have a comprehensive safety program in place at each site. The company’s behavior ensures that personnel at all levels of the organization consider safety as the overriding priority. This is manifested in decisions and actions based on this priority. The work environment and the policies and procedures foster such a safety culture, and the attitudes and behaviors of personnel are consistent with the policies and procedures.”

Code of Federal Regulations (CFR) 29 OSHA Standard 1910.146(c)(2): Permit-required confined spaces states:

“If the workplace contains permit spaces, the employer shall inform exposed employees, by posting danger signs or by any other equally effective means, of the existence and location of and the danger posed by the permit spaces.”

ESRB Inspectors identified that the water tanks located near the O&M building shown in Figure 17 and Figure 18, did not have required confined space signage. Failure to maintain an accurate confined space inventory and ensure proper labeling may result in personnel entering a confined space without appropriate hazard awareness, procedures, or permitting which creates a significant safety risk.

As part of the corrective action plan submitted to ESRB, the Plant must also install proper confined space warning signage at the water tanks and ensure that the Plant maintains a current and accurate list of all confined spaces on site.

Corrective Action Plan:

*AES installed permanent, highly visible ‘Danger: Permit-Required Confined Space’ signage on all identified water tanks (see **Finding #9**). Signage placement ensures clear visibility from all normal approach paths to prevent inadvertent entry.*

AES conducted a site-wide audit to identify all confined spaces and developed a master confined space register. This register includes the location, classification, and identification of each confined space and is maintained as a controlled document to ensure it remains accurate and current.

Finding 10: Birds' nests and bird strike related outages

GO 167-C, Appendix C, MS 9 Conduct of Maintenance states:

“Maintenance is conducted in an effective and efficient manner, so equipment performance and material condition effectively support reliable facility operation.”

GO 167-C, Appendix D, OS 8 Plant Status and Configuration states:

“Facility activities are effectively managed, so the facility status and configuration are maintained to support safe, reliable, and efficient operation.”

ESRB Inspectors discovered several birds' nests lodged underneath solar panels, shown in Figure 19 and Figure 20. Birds and their nests pose several risks to site operations. Birds' nests are composed of debris that could contain flammable or conductive material. The Plant must remove the nests when deemed appropriate in accordance with all applicable environmental regulations and laws. Following the removal of the nest, preventative measures must be taken to prevent future nests from being made around the site.

ESRB Inspectors also found that the Plant has experienced a large volume of bird strikes on high voltage equipment causing outages and reliability issues. The Plant is addressing the issue by installing bird spikes and insulation on some above-ground transmission lines, shown in Figure 21. Bird strikes have continued despite those initial efforts. The Plant must continue to implement bird-strike mitigation to ensure reliability.

Corrective Action Plan:

*AES implemented a structured avian management approach consistent with the Avian Encounter Protocol (see **Finding #10**), which defines requirements for identification, reporting, handling, and removal of nests and avian wildlife interactions. All nest management activities are conducted in accordance with federal and state wildlife protection regulations, including restrictions on disturbance of active nests and requirements for coordination with environmental compliance personnel.*

The protocol further establishes clear procedures for documenting avian encounters, reporting incidents, and implementing appropriate response actions, ensuring regulatory compliance while mitigating operational risk.

AES deployed localized physical deterrents, including expanded bird prevention measures on infrastructure to inhibit nesting and roosting activity in high-risk areas.

AES accelerated installation of engineered bird-strike prevention measures, including expanded insulation sleeves and additional deterrent configurations on overhead transmission structures, to reduce avian interaction with energized components and improve system reliability.