

## PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



December 29, 2025

SA2025-1420

Raul Pantoja  
Manager, T&D Maintenance Planning  
Sacramento Municipal Utility District (SMUD)  
4401 Bradshaw Rd  
Sacramento, CA 95827

**SUBJECT:** Electric Substation Audit of Sacramento Municipal Utility District (SMUD)

Mr. Pantoja:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Tom Roberts and Rafael Herranz of ESRB staff conducted an electric substation audit of SMUD from October 27-31, 2025. During the audit, ESRB staff conducted field inspections of SMUD's substation facilities and equipment and reviewed pertinent documents and records.

As a result of the audit, ESRB staff identified violations of General Order 174. A copy of the audit findings itemizing the violations is enclosed. Please provide a response no later than January 30, 2026, by electronic copy of all corrective actions and preventive measures taken by SMUD to correct the identified violations and prevent the recurrence of such violations.

Please note that ESRB will be posting the audit report and your response to our audit on the CPUC website. If there is any information in your response that you would like us to consider as confidential, we request that in addition to your confidential response, you provide us with a public version (a redacted version of your confidential response) to be posted on our website.

If you have any questions concerning this audit, please contact Tom Roberts at [tom.roberts@cpuc.ca.gov](mailto:tom.roberts@cpuc.ca.gov) or (415) 971-3907.

Sincerely,

A handwritten signature in blue ink, appearing to read "Rickey Tse".

Rickey Tse, P.E.  
Program and Project Supervisor  
Electric Safety and Reliability Branch  
Safety and Enforcement Division  
California Public Utilities Commission

Enclosure: CPUC Electric Substation Audit Report for SMUD

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Cc: Lee Palmer, Deputy Executive Director, Safety and Enforcement Division (SED),  
Safety Policy Division, Water Division, CPUC  
Eric Wu, Program Manager, ESRB, SED, CPUC  
Fadi Daye, Program and Project Supervisor, ESRB, SED, CPUC  
Yi Yang, Senior Utilities Engineer (Supervisor), ESRB, SED, CPUC  
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Tom Roberts, Senior Utilities Engineer (Specialist), ESRB, SED, CPUC  
Raphael Herranz, Utilities Engineer, ESRB, SED, CPUC  
Yongling Sun, Public Utility Resource Analyst, ESRB, SED, CPUC

**CPUC SUBSTATION AUDIT FINDINGS**  
**SACRAMENTO MUNICIPAL UTILITY DISTRICT (SMUD)**  
**OCTOBER 27-31, 2025**

**I. Records Review**

During the substation audit, Electric Safety and Reliability Branch (ESRB) reviewed the following standards, procedures, and records for SMUD Substations:

- List of all SMUD substations,
- Map showing all SMUD distribution substations,<sup>1</sup>
- Current maintenance and inspection program documents,
- Maintenance and inspector training program documents,
- List of all substation inspections conducted in the last five years,<sup>2</sup>
- List of all open/pending, completed, cancelled, and late work orders and maintenance items in the previous five years,
- Equipment lists for the 37 distribution substations,<sup>3</sup>
- Single-line diagrams (SLDs) for the 37 distribution substations,<sup>4</sup>
- Last two visual inspection checklists for 48 substations,
- The last infrared testing records for 48 substations,<sup>5</sup>
- Most recent oil sample test results for 48 substations,
- Most recent electric test results for 48 substations,
- Training records for all substation and maintenance personnel in the past five years,
- Other relevant substation inspections for the past five years for all substations,

**II. Records Violations**

ESRB observed the following violations during the records review portion of the audit:

**1. General Order (GO) 174, Rule 12, General states:**

*“These rules are not intended as complete specifications, but embody only minimum requirements that will promote safety and enable adequacy of service. Substations shall be designed, constructed and maintained for their intended use, regard being given to the conditions under which they are to be operated, to promote the safety of workers and the public and enable adequacy of service.”*

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<sup>1</sup> SMUD initially deemed the location of transmission substations to be confidential and did not include them in the map. SMUD later provided the addresses for transmission substations without any claim of confidentiality.

<sup>2</sup> For transmission substations, the list only included inspections performed beginning August 2024.

<sup>3</sup> Equipment lists for 11 transmission substations were not provided to ESRB due to SMUD assertion of confidentiality. However, SMUD did not provide a confidentiality declaration per GO 66-D.

<sup>4</sup> SMUD did not provide SLDs for transmission substations, but allowed ESRB to view them in the 11 transmission substations inspected during the audit.

<sup>5</sup> ESRB requested test records for only 48 of SMUD’s substations.

*Design, construction and maintenance should be performed in accordance with accepted good practices for the given local conditions known at the time by those responsible.”*

- a) SMUD’s Distribution Substation Visual Inspection Prioritization Procedure, Rev. 8, dated November 2021, establishes the required response time for corrective work as follows:

**Table 1. Corrective Action Response Time Per Priority Code**

<b>Priority Code</b>	<b>Response Time</b>
Urgent	Less than 3 months
Non-Urgent	Less than 12 months
Monitoring	Subsequent Inspection Until Resolved
No Action Required	NA

SMUD provided records for 4,365 corrective actions identified between March 6, 2020, and September 19, 2025, which included completed, cancelled, and open work orders. Analysis of these records found the following deviations from SMUD’s prioritization procedure:<sup>6</sup>

1. 906 records did not include a priority code or due date,<sup>7</sup>
2. 55 records had a priority of “Routine-< 24 months,” which is not included in SMUD’s prioritization procedure,
3. 19 records had a priority of “Routine/Unplan,” which is not included in SMUD’s prioritization procedure.

In addition, there were 2,217 records of completed work orders that included a priority code with a response time, and of these 70 were completed late as shown in Table 2:<sup>8</sup>

**Table 2. Overdue Corrective Action Work Orders**

<b>Notification</b>	<b>Priority</b>	<b>Date Identified</b>	<b>Completion Date</b>	<b>Days Late</b>
11113230	Routine - < 24 Month	3/25/2020	5/8/2025	1140
11119458	Routine - < 12 Month	9/29/2021	5/22/2025	966

<sup>6</sup> An MS Excel workpaper supporting these findings can be provided upon request.

<sup>7</sup> Of these, 815 were cancelled and the records did not provide a work order number or reason for the cancellation.

<sup>8</sup> ESRB added 90, 365, or 730 days to the “Created On” date provided for each record based on the priority code specified by SMUD of 3, 12, or 24 months, and compared this to the Completion Date for each record. 14 records that were calculated to be late between 1 and 5 days are not included in the count of 70 since not every month includes 30 days.



Notification	Priority	Date Identified	Completion Date	Days Late
11117939	Routine - < 12 Month	4/21/2021	9/12/2024	875
11123273	Routine - < 12 Month	4/14/2022	4/24/2025	741
11113172	Routine - < 24 Month	3/6/2020	2/29/2024	725
11116635	Routine - < 12 Month	11/16/2020	10/13/2023	696
11113336	Routine - < 24 Month	4/24/2020	3/7/2024	683
11114113	Routine - < 24 Month	9/3/2020	4/29/2024	604
11118503	Routine - < 24 Month	6/30/2021	1/10/2025	560
11119012	Routine - < 24 Month	8/16/2021	10/3/2024	414
11119062	Routine - < 24 Month	8/17/2021	9/26/2024	406
11122216	Routine - < 24 Month	12/28/2021	1/22/2025	391
11118714	Routine - < 3 Month	7/23/2021	9/27/2022	341
11123274	Routine - < 12 Month	4/14/2022	3/12/2024	333
11118140	Routine - < 24 Month	5/26/2021	4/3/2024	313
11117662	Routine - < 12 Month	3/25/2021	1/30/2023	311
11123036	Routine - < 24 Month	3/28/2022	1/31/2025	310
11122041	Routine - < 12 Month	12/8/2021	10/6/2023	302
11118152	Routine - < 24 Month	5/19/2021	3/14/2024	300
11118151	Routine - < 24 Month	5/19/2021	3/14/2024	300
11117964	Routine - < 24 Month	4/28/2021	2/20/2024	298
11118228	Routine - < 24 Month	6/11/2021	4/4/2024	298
11130927	Routine - < 12 Month	10/3/2023	7/8/2025	279
11122059	Routine - < 12 Month	12/22/2021	9/27/2023	279
11118406	Routine - < 24 Month	6/17/2021	3/18/2024	275
11118460	Routine - < 24 Month	6/29/2021	3/26/2024	271
11118716	Routine - < 24 Month	7/26/2021	4/18/2024	267
11118731	Routine - < 24 Month	7/26/2021	4/17/2024	266
11122706	Routine - < 12 Month	2/22/2022	11/10/2023	261
11118679	Routine - < 24 Month	7/19/2021	3/29/2024	254
11118314	Routine - < 24 Month	6/9/2021	2/15/2024	251
11122363	Routine - < 24 Month	1/7/2022	9/11/2024	248
11119065	Routine - < 12 Month	8/17/2021	4/20/2023	246
11118665	Routine - < 24 Month	7/19/2021	3/21/2024	246
11119052	Routine - < 24 Month	8/17/2021	4/18/2024	245
11122626	Routine - < 24 Month	2/18/2022	10/14/2024	239
11122883	Routine - < 24 Month	3/7/2022	10/25/2024	233
11119170	Routine - < 12 Month	9/8/2021	4/24/2023	228

Notification	Priority	Date Identified	Completion Date	Days Late
11123945	Routine - < 12 Month	8/16/2022	3/25/2024	222
11119372	Routine - < 24 Month	9/17/2021	4/24/2024	220
11118159	Routine - < 3 Month	5/26/2021	3/29/2022	217
11123816	Routine - < 12 Month	7/26/2022	2/23/2024	212
11131328	Routine - < 12 Month	10/10/2023	4/22/2025	195
11120930	Routine - < 24 Month	11/12/2021	5/21/2024	191
11119438	Routine - < 24 Month	9/28/2021	4/4/2024	189
11122067	Routine - < 24 Month	12/13/2021	6/3/2024	173
11120929	Routine - < 24 Month	11/12/2021	5/2/2024	172
11119461	Routine - < 24 Month	9/28/2021	3/7/2024	161
11123788	Routine - < 3 Month	7/13/2022	3/14/2023	154
11122181	Routine - < 24 Month	12/27/2021	5/24/2024	149
11122362	Routine - < 12 Month	1/7/2022	5/12/2023	125
11131172	Routine - < 3 Month	9/28/2023	4/29/2024	124
11123840	Routine - < 24 Month	7/19/2022	11/1/2024	106
11131185	Urgent	9/28/2023	4/4/2024	99
11119377	Routine - < 3 Month	9/22/2021	3/8/2022	77
11127730	Routine - < 3 Month	3/15/2023	8/23/2023	71
11119622	Routine - < 3 Month	10/21/2021	3/29/2022	69
11128326	Routine - < 3 Month	5/10/2023	10/11/2023	64
11132739	Routine - < 12 Month	1/22/2024	3/25/2025	63
11127556	Routine - < 24 Month	2/6/2023	4/2/2025	56
11123654	Routine - < 3 Month	6/22/2022	11/11/2022	52
11127758	Routine - < 3 Month	3/14/2023	8/2/2023	51
11133105	Routine - < 12 Month	2/27/2024	4/15/2025	48
11133267	Routine - < 12 Month	3/7/2024	4/18/2025	42
11128578	Routine - < 3 Month	6/13/2023	10/17/2023	36
11129621	Routine - < 3 Month	9/26/2023	1/25/2024	31
11131318	Routine - < 3 Month	10/4/2023	2/1/2024	30
11122373	Routine - < 3 Month	1/7/2022	4/21/2022	14
11126237	Routine - < 24 Month	11/29/2022	12/11/2024	13
11127338	Routine - < 24 Month	1/3/2023	1/10/2025	8

A similar calculation performed using the “Required End/SMUD Due Date” provided by SMUD for each record indicated that only one work order was closed

5 days late.<sup>9</sup> This indicates that the due date provided by SMUD is not consistent with its procedure.

These findings indicate that SMUD is in violation of Rule 12 for not following the prescribed priority due dates in its procedures.

- b) ESRB's Pre-Audit Data Request (PADR) requested current and prior versions of documents relating to substation inspection and maintenance in questions 3 and 4, respectively. In response, SMUD provided two current documents:<sup>10</sup> Distribution Substation Visual Inspection Plan<sup>11</sup> and "Substation\_Electrician\_Procedure\_Manual\_BOW\_2025."<sup>12</sup> The former document is discussed in Section II.2 below. The Substation Electrician Procedure Manual provides a wide range of flow charts and procedures to guide electricians in performing substation testing, repair, and maintenance work, but it lacks information on a preventative maintenance program. The work described in this manual could be triggered by reported outages or faults, anomalous SCADA readings, and routine inspections, but accepted good practice also requires proactive maintenance work based on calendar intervals (e.g. every 6, 12, or 24 months), and/or the number of operational cycles as recorded on counters. SMUD's lack of a documented preventative maintenance plan is not consistent with accepted good practices, and a violation of Rule 12.
- c) SMUD document "Substation\_Electrician\_Procedure\_Manual\_BOW\_2025" includes a section on Battery Safety which describes protective equipment "to be available to all personal working with batteries," including an emergency eye wash facility.<sup>13</sup> Section IV below describes some specific issues with eye wash stations, and ESRB observed that in general, SMUD's practices regarding eye wash stations is not consistent with industry best practices.<sup>14</sup> ESRB observed many different types of eyewash stations during its field audit, but most older distribution stations did not have a permanent eyewash station adjacent to the substation battery bank. SMUD staff explained that substation personnel are required to keep eye wash bottles in their vehicles, but did not provide documentation of this assertion.<sup>15</sup> Even if this is an official requirement, having eyewash in a vehicle which could be outside the substation perimeter is much less

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<sup>9</sup> Work Order 11112193. According to ESRB calculations this work order was completed 5 days early. In addition, the record for work order 11109154 did not include a due date, but ESRB calculations showed this was closed 89 days early, one day after the creation date.

<sup>10</sup> SMUD did not provide prior versions of documents in response to ESRB PADR Question 4.

<sup>11</sup> Document number SP6603, Revision 7, dated 10/2022. Seven attachments to this document were also provided.

<sup>12</sup> This document does not have cover page with document title, document number, revision number, approval date, etc. Based on conversations with SMUD during the audit kick-off meeting on October 27, 2025, this 1029 page document is a compilation of many existing substation procedures, and SMUD is currently parsing the document into multiple documents which will be subject to document control similar to the Distribution Substation Visual Inspection Plan.

<sup>13</sup> SMUD's response to ESRB PADR Question 4, page 79.

<sup>14</sup> For example, refer to California Code of Regulations, Title 8, Section 516,. Emergency Eyewash and Shower Equipment.

<sup>15</sup> ESRB did not request this documentation.

effective than having it directly adjacent to the battery bank. In case of an accident that temporarily blinds a worker, it would be very difficult to access eye wash even if it were in the bed of a truck parked right next to the battery enclosure. Nearly all recently constructed distribution substations ESRB inspected had eyewash stations attached to the door of the battery enclosure, indicating this is a common safe industry practice. SMUD should install eyewash stations adjacent to batteries in all of its substations to ensure compliance with Rule 12.

## 2. GO 174, Rule 30.1, Inspection Program General states:

*“Each Operator shall establish, update as needed, and follow an Inspection Program. At a minimum, this Program shall specify for each piece of equipment and system listed in Rule 32.1:*

- *Inspection activities,*
- *Frequency of Inspections,*
- *Recordkeeping and retention”*

In addition, **GO 174 Rule 21 Inspection Definition** states:

*“Inspection: a basic evaluation, generally performed using visual and auditory senses, but which could be conducted by other means.”*

In response to ESRB’s request for information about SMUD’s Inspection Program, SMUD provided two documents as discussed in Section II.1.b above: Distribution Substation Visual Inspection Plan and “Substation\_Electrician\_Procedure\_Manual\_BOW\_2025.” The first document demonstrates compliance with Rule 30.1 for a subset of inspections: visual inspections of distribution substations and provides a benchmark for evaluating SMUD’s full inspection program. Limitations of these documents, detailed below, indicate a lack of full compliance with Rule 30.1.

First, SMUD’s Distribution Substation Visual Inspection Plan explicitly excludes transmission substations: “this inspection plan only applies to SMUD’s distribution substations.”<sup>16</sup> A comparable document for transmission substations was not provide. In addition, SMUD only provided records of transmission substation inspections starting in August 2024. While the scope of SMUD’s inspection plan is consistent with GO 174 when the document was issued in 2022, the scope of GO 174 expanded in July 2024 to include transmission substations.<sup>17</sup> SMUD designates 29 of its 223 substations as not being distribution substations, which implies they are transmission substations.<sup>18</sup> Based on the data provided by SMUD, it lacks a documented inspection program for non-distribution substations, and therefore is not compliant with Rule 30.1.

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<sup>16</sup> Page 2, Section 1.2, Scope.

<sup>17</sup> GO 174 was modified on July 11, 2024, by Resolution ESRB-11.

<sup>18</sup> SMUD’s response to ESRB PADR Questions 18, 19, and 20.

Second, visual inspection is only one type of inspection that is typically performed at electric substations, as noted in GO 174 Rule 21. Rule 30.1 requires utilities to specify the inspection activities included in the inspection plan. SMUD's Distribution Substation Visual Inspection Plan acknowledges that it does not document all inspection activities: "The more detailed inspections and maintenance activities that may be required as a result of the basic visual and auditory inspections are not covered under this document."<sup>19</sup> As noted above regarding Rule 12, utilities must follow best practices for the maintenance of its substations, and these best practices includes more than just *visual* inspections to ensure facilities are properly maintained. This is supported by SMUD's own records, which demonstrate that it performs infrared inspections and routine electrical and oil testing.<sup>20</sup> ESRB acknowledges that there are limitations and some ambiguity in the Rule 21 definition of inspections, but based on auditing utilities statewide, there is clear consensus that inspection is one of the primary mean of establishing when maintenance is needed. The textbook definition of "inspection" is consistent with this interpretation: "*Inspection, noun, a checking or testing of an individual against established standards*"<sup>21</sup> Since SMUD has not defined all of its inspection activities or provided the frequency of these activities or record requirements, it is not in compliance with Rule 30.1.

Third, SMUD's response to ESRB data request Question 10 stated that "SMUD does not have fire suppression systems at distribution or transmission substations." Its Distribution Substation Visual Inspection Plan also states that "fire detection/suppression systems and reactors are not installed at SMUD's distribution substations and hence are not included in this plan."<sup>22</sup> As noted in Section IV.3.1. below, ESRB's field audit did not observe fire detection/suppression systems in distribution substations, but fire suppression systems were observed in transmission substations. Therefore, the three requirements of Rule 30.1 have not been met with respect to the inspection of fire detection and suppression systems.

### **3. GO 174, Rule 30.2, Inspection Program General states:**

*"Inspections shall be performed by persons who, by reason of training, experience and instruction, are qualified to perform the task."*

Section 3 of SMUD's Distribution Substation Visual Inspection Plan states is part:<sup>23</sup>

*"Qualified personnel (persons who by reason of training, experience and/or instruction, are qualified to perform the task) are responsible to inspect substations subject to this plan"*

SMUD's Distribution Substation Visual Inspection Plan does not describe the training, experience, or instruction required for an inspector to be deemed qualified. In response to

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<sup>19</sup> Page 2, Section 3, Inspections.

<sup>20</sup> SMUD's response to ESRB PADR Question 1.

<sup>21</sup> Merriam-Webster Dictionary.

<sup>22</sup> Page 3, Section 4, Switchyard & Substation Equipment.

<sup>23</sup> Attachment to SMUD's response to ESRB PADR Question 3. SMUD Document SP6603, Revision 7, dated 10/2022.

ESRB’s request for “a copy of the utility’s *inspector* training policy,” SMUD provided a document titled “Substation *Maintenance* Worker Training Program.”<sup>24</sup> No other information regarding the training or qualification of inspectors was provided and SMUD has not shown that inspections are conducted by qualified personnel. Therefore, SMUD has not demonstrated compliance with Rule 30.2.

**4. GO 174, Rule 40, Annual Filings** states:

*“40.1 - No later than July 1st of each year, each Operator shall transmit to the Safety and Enforcement Division (SED), or its successor, an Inspection Program Summary.*

*Changes to the Inspection Program shall be reflected in the Inspection Program Summary, including the effective date of the change. Should no changes occur since the previous filing, the Operator shall transmit written correspondence confirming that no changes were made to the Program.*

*40.2 - No later than July 1st of each year, each Operator shall transmit to the Safety and Enforcement Division (SED), or its successor, a report summarizing completed and past due Inspections for the prior calendar year.”*

ESRB records include two annual reports from SMUD for the calendar years 2014 and 2015, but no reports have been provided since that time.<sup>25</sup> While both reports filed satisfy the requirements of Rule 40.2, the reports do not comply with Rule 40.1. Therefore, SMUD is not in compliance with Rule 40.

### III. Field Inspection

During the field inspection, ESRB inspected the following 35 substations:<sup>26</sup>

Substation	City
STB	Sacramento
STG	Sacramento
COR	Rancho Cordova
LAK	Folsom
CNX	Elk Grove

<sup>24</sup> ESRB PADR Question 11, emphasis added.

<sup>25</sup> The reports are dated September 2014 and February 2016 respectively and each indicates that 1,810 inspections were performed. For reference, SMUD’s response to ESRB PADR Question 12 indicated 2,280, 2,049, and 2,233 inspections were performed for year 2023, 2024, and 2025 respectively, including both distribution and transmission substations.

<sup>26</sup> SMUD code names are used for transmission substations, the first 11 rows of this table, to provide confidentiality.

<b>Substation</b>	<b>City</b>
CPP	Herald
RSS	Herald
CAR	Carmichael
OVL	Citrus Heights
HUR	Sacramento
MC1	McClellan
Crystal Creamery	Sacramento
Mather	Rancho Cordova
Oselot - Baroque	Rancho Cordova
Placerville - Grand Prairie	Folsom
Winding Way - New York	Fair Oaks
White Rock - Sunrise	Rancho Cordova
Eschinger - Bruceville	Elk Grove
Franklin - Hood Franklin	Elk Grove
Franklin - Lambert	Elk Grove
Galt	Galt
Herald - Twin Cities	Herald
Hood - Franklin	Hood
88th - Fruitridge	Sacramento
Frienza - Albatross	Sacramento
Gilman - Cornelia	North Highlands
Imran Woods - Whyte	Citrus Heights
Parkoaks - Hilltop	Carmichael
Royale - Yorkshire	Sacramento
San Simeon - Stefano	Citrus Heights
Walerga - Antelope	Sacramento
Del Paso - East Commerce	Sacramento
Meister - Badiee	Sacramento
McClellan - Central Tie	Sacramento

Substation	City
Truxel	Sacramento

#### IV. Field Inspection – Violations List

ESRB observed the following violations of GO 174, Rule 12 during the field inspection:

**GO 174, Rule 12, General** states in part:

*“...Substations shall be designed, constructed and maintained for their intended use, regard being given to the conditions under which they are to be operated, to promote the safety of workers and the public and enable adequacy of service.*

*Design, construction, and maintenance should be performed in accordance with accepted good practices for the given local conditions known at the time by those responsible.”*

##### 1. STG Substation

1.1. Eyewash adjacent to the battery room expired in December 2022.



##### 2. STB Substation



2.1. Damaged counter on CB 5220.<sup>27</sup>



2.2. Debris around Bank 3 and in the cooling fans.

<sup>27</sup> Load and inspection reports for July and August 2025 show counter readings of 12 and 13, respectively.





### 3. LAK Substation

3.1. The substation has a fire suppression system. Refer to Section II.2 above.





3.2. Bird nest in CB102 current transformer.



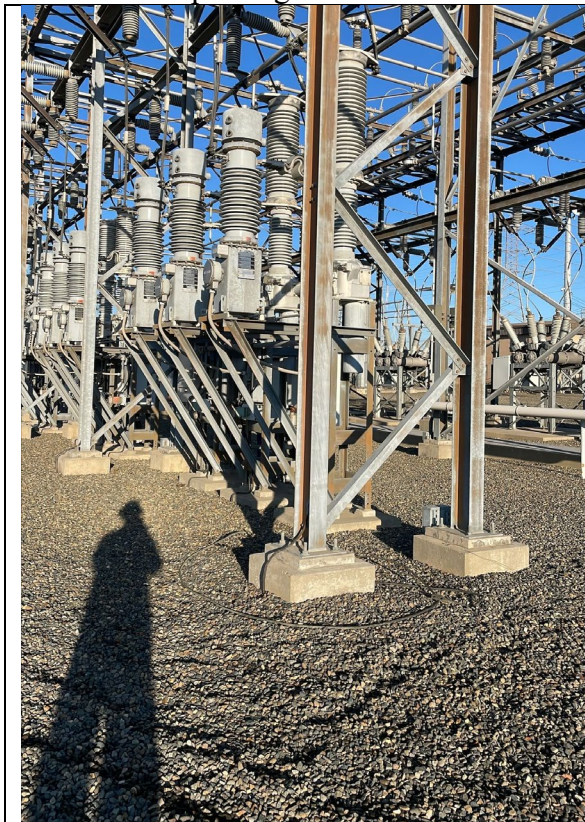
3.3. Damaged counter for CB 7210.<sup>28</sup>

<sup>28</sup> Load and inspection reports for July and August 2025 each show counter readings of 314.





3.4. Exposed ground cable in the 69 kV yard near switch 7222 poses a tripping hazard.





#### 4. White Rock-Sunrise Substation

4.1. Two of the three surge arrester counters on Bank 1 have opaque and illegible screens.



#### 5. COR Substation

5.1. Bird nests have fallen out of the transformer bank radiators and are resting on the cooling fans.



#### 6. RSS Substation

6.1.Eyewash adjacent to the battery room expired in June 2023.





6.2. Bird nests on all phases of SW 301.



6.3. Hours counter for CB 300 is damaged.<sup>29</sup>



7. Eschinger – Bruceville Substation

7.1. Bird nest in voltage regulator radiator.



<sup>29</sup> Counters in the image appear to read 7.5 hours and 887 cycles. Load and inspection reports for July and August 2025 each show counter readings of 6.2 hours and 887 cycles.



## 8. Franklin-Hood Substation

### 8.1. Bird nests in transformer radiator.



## 9. Hood-Franklin Substation

- 9.1. ESRB's inspection was limited due to wasps within the metal-clad unit enclosure.  
Regular removal of wasp nests ensures inspection, maintenance, and repair work can be performed unimpeded while safeguarding worker health and safety.

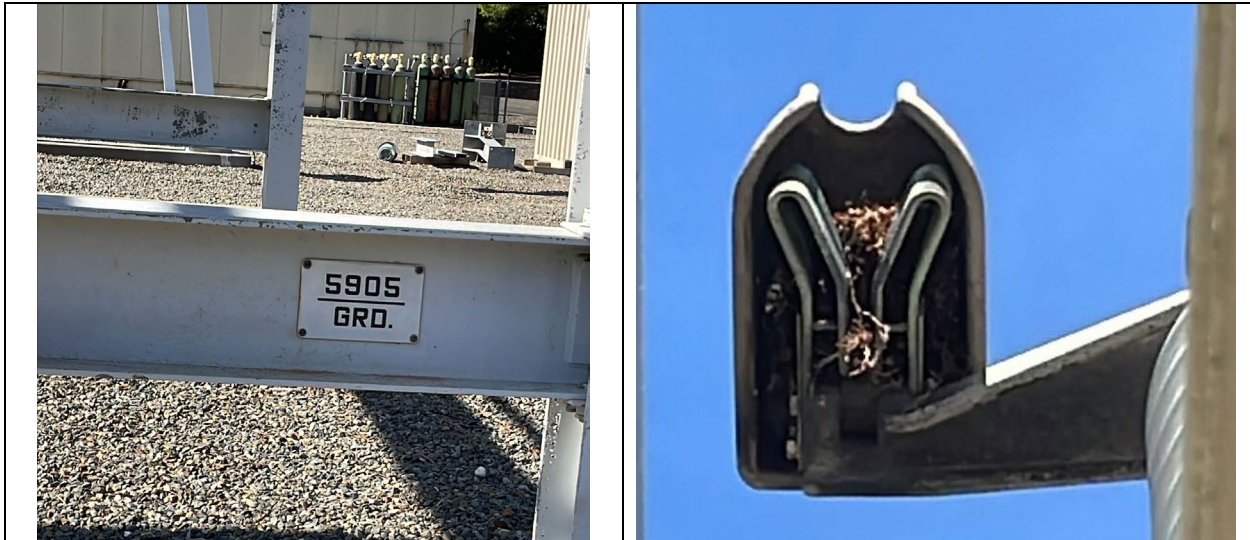
## 10. CNX Substation

10.1. Vegetation is growing over the perimeter fence.

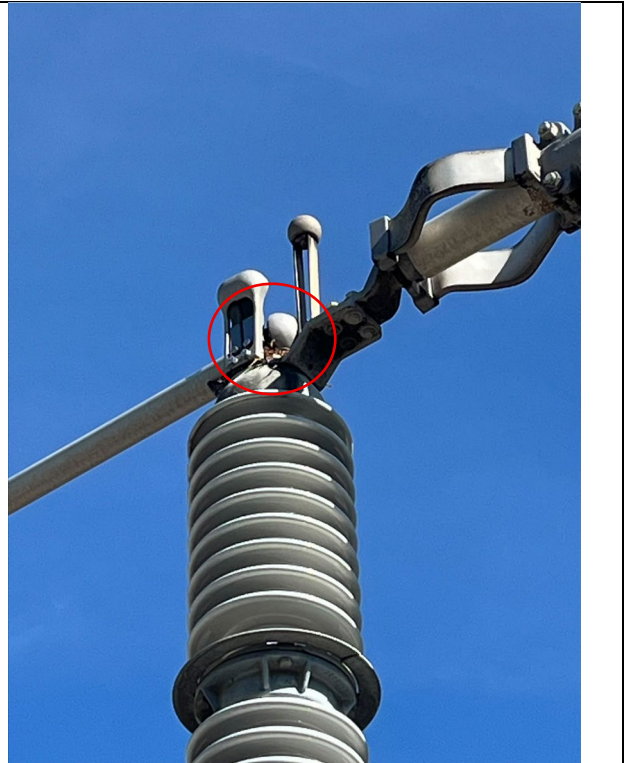


## 11. CAR Substation

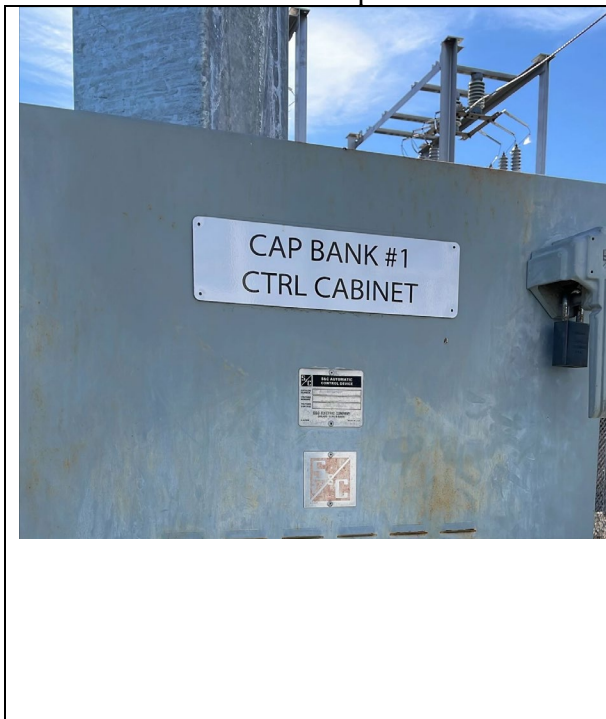
11.1. Bird nests in switch 5905 and 5901 Phase C.







11.2. Bird nest in capacitor bank 1 switch.



## 12. 88th - Fruitridge Substation

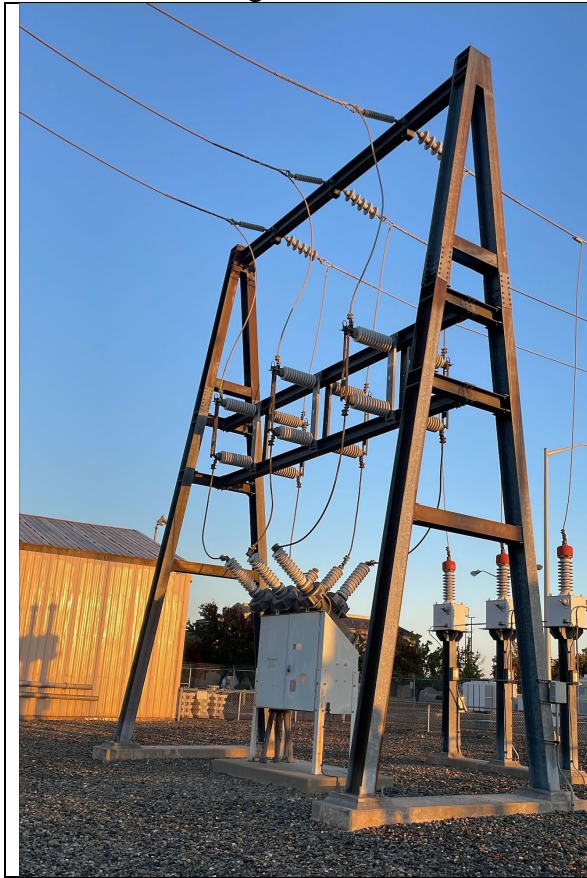
### 12.1. Bird nest in Bank 1 radiator.





### 13. MC1 Substation

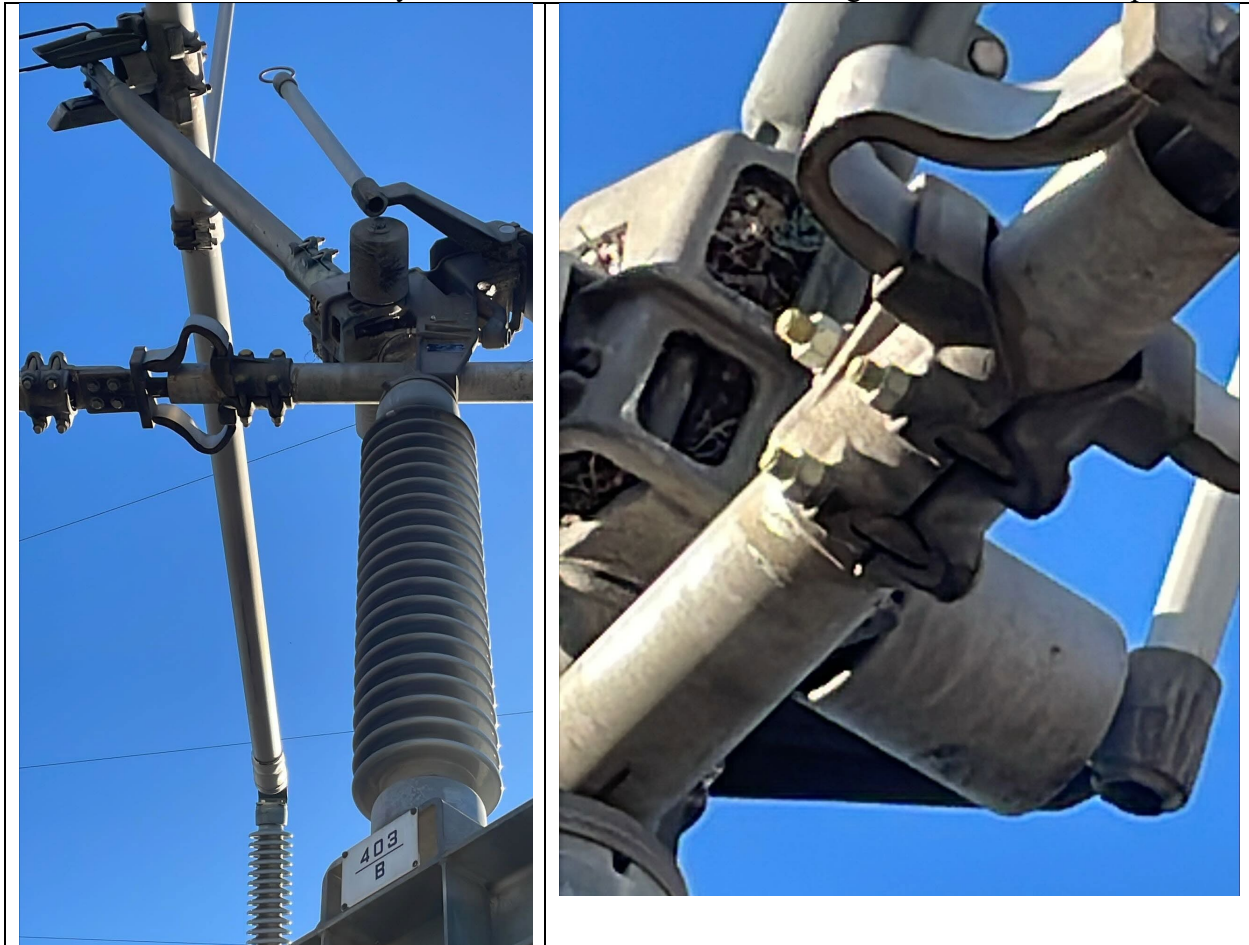
#### 13.1. Damaged counter on CB 914.<sup>30</sup>



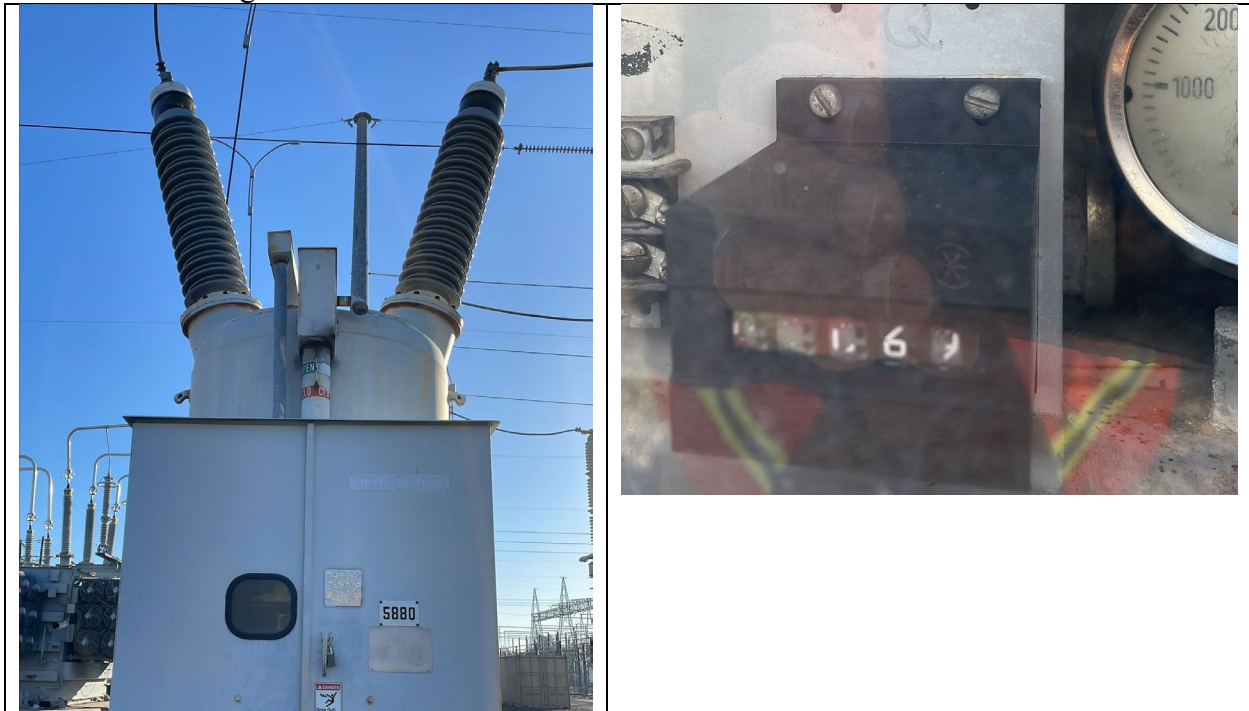
<sup>30</sup> Substation Load and Inspection Reports for July and August 2025 each show 77 cycles.

#### 14. HUR Substation

14.1. Bird nests on many switches on the 115 kV bus. Image below is for 403 B phase.



#### 14.2.Damaged counter on CB 5880.<sup>31</sup>



<sup>31</sup> Substation Load and Inspection Reports for July 2025 does not provide data for CB 5880. A report for August 2025 was not provided to ESRB.