

ELDORADO-LUGO-MOHAVE (ELM) SERIES CAPACITATOR PROJECT

Date: November 17, 2023
To: Eric Chiang, Project Manager, CPUC
From: Vida Strong, Aspen Project Manager
Subject: Monitoring Report #28: October 2023

Introduction

This report provides a summary of the construction and compliance activities associated with Southern California Edison's (SCE) El Dorado-Lugo-Mohave (ELM) Series Capacitor Project (Project). Although the following list includes Project-wide components, this report is limited to construction and compliance activities under the jurisdiction of the California Public Utilities Commission (CPUC), which includes non-federal California lands. Overall project components include:

■ **Series Capacitors:**

- Construction of two new 500 kV mid-line series capacitors (i.e., the proposed Newberry Springs Series and Ludlow Series Capacitors) and associated equipment.
- Installation of two communication paths between the series capacitor sites, which includes approximately two miles of overhead and two miles of underground alignments.
- Providing station light and power to the proposed series capacitors by extending and/or rerouting existing lines to create approximately two miles of overhead and 700 feet of underground 12 kV distribution circuits.

■ **Repeater Facilities:**

- Construction of three new fiberoptic repeater facilities (Barstow, Kelbaker, and Lanfair) within the Lugo-Mohave right-of-way (ROW).
- Installation of distribution lines for light and power at the three proposed fiberoptic repeater sites.

■ **Overhead Clearance Discrepancies:**

- Relocation, replacement, or modification of existing transmission, subtransmission, and distribution facilities at approximately 12 locations along the Eldorado-Lugo, Eldorado-Mohave, and Lugo-Mohave 500 kV transmission lines to address 14 of the overhead clearance discrepancies.
- Tower modifications would include raising nine towers up to approximately 18.5-feet by inserting new lattice steel sections in tower bodies.
- Performing minor grading at two locations along the Lugo-Mohave 500 kV transmission line to address two of the overhead discrepancies.

■ **Optical Ground Wire (OPGW):**

- Installation of approximately 232 miles of OPGW which include approximately 59 miles on the Eldorado-Mohave transmission line, approximately 173 miles on the Lugo-Mohave transmission line, and approximately three miles of underground telecommunications facilities in the vicinity of the Mohave Substation.

- Modifications and strengthening of the ground wire peak of existing suspension towers where OPGW splices would occur (some of these towers would also require minor modifications to the steel in the tower body).

■ **Substation Upgrades:**

- Lugo Substation: Modifications to the existing series capacitors, installation of new terminating equipment, removal of two existing tubular steel poles (TSPs), and installation of two new TSPs on the Eldorado-Lugo and Lugo-Mohave 500 kV transmission lines.
- Eldorado Substation: Modifications on the existing series capacitors and upgrades to the terminal equipment on the Eldorado-Lugo 500 kV transmission line.
- Mohave Substation: Replacement of existing series capacitors on the Lugo-Mohave 500 kV transmission line and installation of new terminal equipment on the Eldorado-Mohave and Lugo-Mohave 500 kV transmission lines.
- Telecommunications Facilities: Installation of approximately 2,000 feet of underground telecommunications facilities within the existing Lugo, Eldorado, and Mohave Substations.

■ **Cathodic Protection (if necessary)**

- Installation of approximately 60 miles of Southern California Gas Company’s (SoCalGas) natural gas pipelines parallel to SCE’s Lugo-Mohave 500 kV transmission line and on other pipelines as needed.

CPUC Environmental Monitors (EMs)

CPUC EM Eleanor Baker conducted a site visit on October 26, 2023. See Photos 1 through 4.

CPUC Notices to Proceed (NTPs)

Table 1 summarizes the NTPs issued for the Project by the CPUC, to date. No additional NTPs are required.

| Table 1 - CPUC Notices to Proceed | | | |
|--|-----------------------|--------------------|--|
| NTP | Date Requested | Date Issued | Description |
| NTP #1 | 09-22-2020 | 12-14-2020 | <ul style="list-style-type: none"> ▪ Modifications at the Lugo Substation ▪ Mid-Line Series Capacitor Construction at Ludlow Series Capacitor 5 ▪ Distribution and Telecommunications Construction for Mid-Line series Capacitors and the Barstow Repeater ▪ Staging Yard construction at the Ludlow Series Capacitor Yard |
| NTP #2 | 03-23-2021 | 04-01-2021 | <ul style="list-style-type: none"> ▪ Tower raise modifications on the Lugo-Mohave and Eldorado-Lugo transmission lines (two locations) ▪ Establishment of Helicopter Landing Zone 184 ▪ Development of the Coolwater Staging Yard |
| NTP #3 | 04-29-2021 | 05-13-2021 | <ul style="list-style-type: none"> ▪ Installation of OPGW fiber optic line along the Lugo-Mojave transmission line from Structure M165-T4 (near California/Nevada border) to Structure M68-T2 (near Ludlow Series Capacitor) ▪ Modifications to strengthen overhead structures with new OPGW splice structures ▪ Development of the Fenner Staging Yard and Ludlow Alternative Staging Yard |

| Table 1 - CPUC Notices to Proceed | | | |
|--|-----------------------|--------------------|---|
| NTP | Date Requested | Date Issued | Description |
| NTP #4 | 05-28-2021 | 06-08-2021 | <ul style="list-style-type: none"> ▪ Installation of OPGW fiber optic line along the Lugo-Mohave transmission line from Structure M66-T3 (west end) to Lugo Substation (east end) ▪ Modifications to strengthen overhead structures with new OPGW splice structures ▪ Development of the Arrow Lake Road Staging Yard and Bear Valley Staging Yard |

Construction & Compliance

A summary of construction and compliance activities is provided below by NTP. Allowed construction activities under each NTP is summarized in Table 1 above.

- **NTP #1.** To date, all pre-compliance materials associated with NTP #1 have been approved by CPUC. Construction activities associated with NTP #1 began on January 4, 2021 and continued throughout the reporting period.
- **NTP #2.** To date, all pre-compliance materials associated with NTP #2 have been approved by CPUC. Construction activities associated with NTP #2 began on June 7, 2021 and have been completed.
- **NTP #3.** To date, all pre-compliance materials associated with NTP #3 have been approved by CPUC. Construction activities associated with NTP #3 began on May 19, 2021 and have been completed with the exception of site restoration and salvage plant maintenance.
- **NTP #4.** To date, all pre-compliance materials associated with NTP #4 have been approved by CPUC. Construction activities associated with NTP #4 began on September 30, 2021 and have been completed with the exception of site restoration and salvage plant maintenance.

Summary of All Construction Activity

Construction activities associated with NTP #1 that were conducted during the reporting period include:

1. For the currently approved Lugo Substation distribution, and telecommunications components, construction activities are being performed by SCE crews. No construction activities associated with the Ludlow Series Capacitor, facilities testing/support, and adjacent materials yard took place during the reporting period.
2. Construction activities occurring at Lugo Substation and Barstow Repeater are expected to resume in winter 2023.
3. Construction and construction support activities occurring at Ludlow Series Capacitor and Mid-Line during the subject reporting period were minimal, limited to insulator replacements, installation of security systems, and periodic facilities testing.
4. To date, activities associated with the Ludlow Series Capacitor and Mid-Line are approximately 99 percent complete.

Construction activities associated with NTP #2 that were conducted during the reporting period include:

1. To date, activities associated with the tower raise modifications along the Lugo-Mojave transmission line are 100% complete.

Construction activities associated with NTP #3 that were conducted during the reporting period include:

1. To date, activities associated with the OPGW fiber optic line along the Lugo-Mojave transmission line from Structure M165 T4 (near California/Nevada border) to Structure M68 T2 (near Ludlow Series Capacitor) are 100% complete. Site restoration and salvaged plant maintenance are on-going.

Construction activities associated with NTP #4 that were conducted during the reporting period include:

1. To date, activities associated with the OPGW fiber optic line along the Lugo-Mohave transmission line from Structure M66 T3 (west end) to Lugo Substation (east end) are 100% complete. Site restoration and salvaged plant maintenance are on-going.

Environmental Compliance

1. There were no Incident Reports, Project Memoranda, or Non-Compliance Reports issued by the CPUC during the reporting period.
2. There were no self-reported Level 1 incidents documented during the reporting period.
3. SWPPP maintenance items/corrective actions recorded during the reporting period, including the following: perimeter BMP's (fiber rolls/wattles) at both SC2 and SC5 are in need of replacements due to deterioration and/or animal damages incurred over time, novel storm-flow site concerns revealed with recent September rainfall that require addressing/solutions implemented (discussions with project QSD are ongoing), and reports of dust-generating road conditions (road between SC2 and SC5). Of note, the site SWPPP inspector stated that the remaining damaged perimeter wattles on both sites are functional, and replacement/maintenance schedules are dependent upon energization and reclamation. No additional dust control will be provided during inactive construction periods.
4. There were no reportable (>1 gallon) spills identified during the reporting period.
5. Avian activities during the subject reporting period are summarized below. If required, nest management, including establishment of buffers and the removal of inactive non-special-status bird species' nests, was implemented per the requirements of the project Nesting Bird Management Plan (NBMP).
 - There were no nest buffer reductions or nest failures due to Project activities during the subject period.
 - There were no active nests/nest buffers in CPUC jurisdiction during the reporting period.
 - There were no project-related mortality events observed during the reporting period.
 - To date, there are 17 active buffers on unconfirmed golden eagle nests (nest status needs to be verified) either located within or with buffers that overlap work areas under CPUC oversight.
6. No special-status species were observed or detected during the reporting period.
7. On June 16, 2021, SCE submitted copies of email messages identifying approvals from the County of San Bernardino for work extended hours.

Minor Project Refinements (MPRs) and Temporary Extra Workspaces (TEWS)

Table 2 summarizes the CPUC MPRs and TEWS issued since the start of construction. No MPRs or TEWS were submitted for approval during the subject reporting period.

| Table 2 – Minor Project Refinements and Temporary Extra Workspaces | | | |
|---|-----------------------|--------------------|--|
| MPR/ TEWS | Date Requested | Date Issued | Description |
| MINOR PROJECT REFINEMENTS (MPRs) | | | |
| 1 | 08-26-2021 | 09-08-2021 | Additional work areas. |
| 2 | 09-24-2021 | 09-30-2021 | Work areas, walking paths, water sources. |
| 3 | 10-11-2021 | 10-21-2021 | Additional work areas. |
| 4 | 10-13-2021 | 10-21-2021 | Additional work areas, distribution line modification. |
| 5 | 10-13-2021 | 10-15-2021 | Potable water source, additional work areas. |
| 6 | 12-21-2021 | 01-11-2022 | Induction fencing. |
| 7 | 01-20-2022 | 01-26-2022 | Additional water source. |
| TEMPORARY EXTRA WORKSPACES (TEWS) | | | |
| 1 | 05-10-2021 | 05-10-2021 | ▪ Use of existing access road between Structures M162-T1 and M163-T1 and M164-T1 and M164-T2 |

CPUC Incident Reports, Project Memoranda (PMs) and Non-Compliance Reports (NCRs)

Table 3 summarizes the CPUC Project Memorandum and Incident Reports issued since the start of construction. No Incident Reports, PMs, or NCRs were issued during the subject reporting period.

| Table 3 – CPUC Incidents, Project Memoranda (PM), and Non-Compliance Reports | | | | |
|---|----------------------------------|--------------------|-------------------------|---|
| Incident/ PM/NCR | Regulatory Requirement | Date Issued | Location | Description |
| INCIDENT REPORTS | | | | |
| Level 1 Incident | MM CR-5 | 02-04-21 | Ludlow Series Capacitor | On February 3, 2021, the CPUC EM documented no monitors present in an area where monitoring is required. |
| Level 1 Incident | APM AIR-02 | 04-07-21 | Ludlow Series Capacitor | Between March 30 and April 6, 2021, a non-compliant piece of heavy equipment was utilized. |
| Level 1 Incident | MM BR-10 | 04-08-21 | Project-wide | Data associated with golden eagle surveys and potential nesting sites was not provided to the CPUC within the required timeframe. |
| Level 1 Incident | MM T-3 Helicopter Use Plan MMCRP | 06-14-21 | Project-wide | Providing insufficient data for helicopter flight tracks review |

| Table 3 – CPUC Incidents, Project Memoranda (PM), and Non-Compliance Reports | | | | |
|---|---|------------------------|--|---|
| Incident/ PM/NCR | Regulatory Requirement | Date Issued | Location | Description |
| PROJECT MEMORANDUMS | | | | |
| PM 001 | ITP 8.8 MM BR-1 | 03-08-21 | Ludlow Series Capacitor Lugo Substation | <ul style="list-style-type: none"> ▪ On March 5, 2021, the CPUC EM observed project activities that had occurred prior to the installation of required desert tortoise exclusionary fencing. Several records identified of monitors commencing activities onsite prior to CPUC concurring with agency approvals. |
| NON-COMPLIANCE REPORTS | | | | |
| NCR 001 | MM T-3 MM BR-10 NBMP MMCRP Helicopter Use Plan | 06-16-21 | Various | <ul style="list-style-type: none"> ▪ Operating a helicopter without the required GPS tracking device Removing buffers for golden eagle nests without notification or documentation Unreported mortality event of red-tailed hawk Non-notification of nest buffer reduction at red-tailed hawk nest Late reporting of Level 1 incident of helicopter nest buffer incursion Multiple nest buffer incursions over the period of 5/17/21 to 6/6/21 Inadequate daily flight track review by contractor Inappropriate inactive nest determination based on 15-minute observation of nest Lack of self-reporting by contractor when compliance items are identified |

Photos



Photo 1: A container observed in SC5's laydown yard with an open-top (not covered) which may pose a waste containment/wildlife attractant concern, depending on the contents. CPUC EM notified SCE monitoring staff.

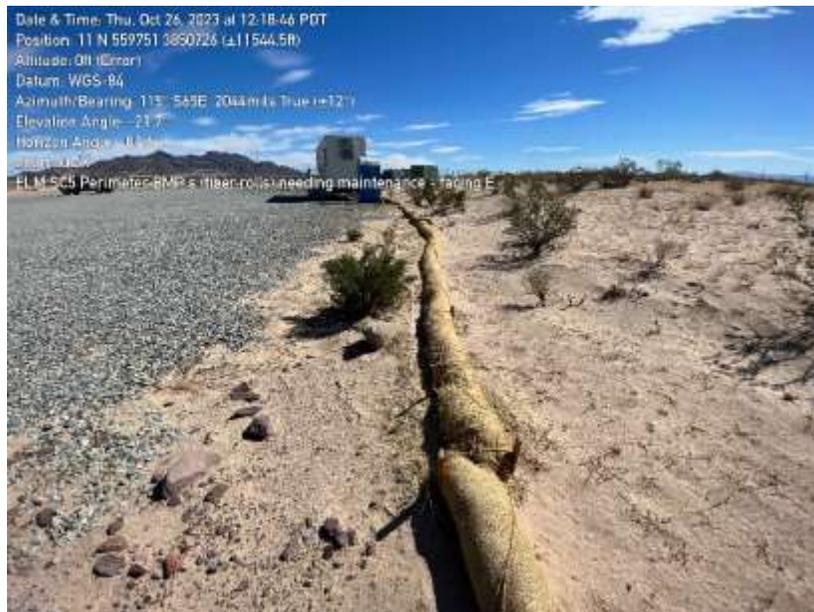


Photo 2: Perimeter wattle along southeastern border of SC5 slightly deteriorating and in need of maintenance/repair, as noted in the weekly environmental compliance reports (SWPPP section).



Photo 3: Excess large rock/riprap present on site at SC5.



Photo 4: CPUC EM visually inspecting condition of tortoise guards on site. All tortoise guard entrances were free of debris, observed in good condition, and entrances were not occluded/remain functional.