

## **ELDORADO-LUGO-MOHAVE (ELM) SERIES CAPACITATOR PROJECT**

**Date:** January 30, 2025  
**To:** Eric Chiang, Project Manager, CPUC  
**From:** Vida Strong, Aspen Project Manager  
**Subject:** Monitoring Report #33: July, August, and September 2024

### **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)**

Due to decreased level of construction activity on CPUC lands, site visits were not conducted during the months of July, August, or September 2024. CPUC EMs continue to monitor the task-of-day and compliance notices generated by EPG to stay informed of any projected construction and compliance activities taking place on CPUC lands.

**CPUC Notices to Proceed (NTPs)+**

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

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

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

## 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 Beta (mobilizing inventory, demo-panel in MEER and rewire, salvaging platform equipment), SCE, Siemens (capacitor inspection, C&P panel installation) crews, and Rising Edge (mobilizing inventory and equipment, installation of new equipment, demo-panel in MEER, demo of platforms, remove old/install new reactor support beams, and fabrication and welding of new SCH80 IPS).
2. EPG conducted preconstruction surveys on July 27, 2024 for sensitive biological resources prior to material deliveries to the Lugo Substation laydown yard, with no findings of concern.
3. Testing and energization activities continued for the series capacitors.
4. Construction and construction support activities occurring at Ludlow Series Capacitor and Mid-Line during the subject reporting period consisted of deliveries of materials, Rising Edge crews providing Siemens support, SCE personnel switching capacitors, Siemens conducting corona checks and conducting work in MEER at various construction areas (with Robertson Waite support), biological surveys, and SWPPP inspections.
5. To date, activities associated with the Ludlow Series Capacitor and Mid-Line are 100 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-Mojave 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:
  - QSP July 24<sup>th</sup> inspections identified several perimeter wattles at both SC2 and SC5 were damaged (large holes) and increasing animal damage (see Photos 1 and 2). Outstanding SWPPP maintenance item/corrective actions recorded.
  - QSP August 7<sup>th</sup> inspections identified damaged stockpile coverings (ripped geo-tex fabric, exposing stockpiled soil) at SC2. Bags of gravel material have been placed on top of the damaged coverings in specific locations in order to secure the ripped fabric; however, several of the gravel bags also show some damage/disintegration over time (see Photos 3 and 4). Outstanding SWPPP maintenance item/corrective actions recorded.
  - QSP August 14<sup>th</sup> inspections identified (for the second time during the reporting period) multiple damaged perimeter wattles at both SC2 and SC5, consisting of large holes and tears, spilling out of straw material, and loss of functionality as an effective BMP. This observation was recorded by the QSP as a Compliance Checklist Deficiency for this week's inspection and recommended the replacement or removal of the ineffective BMP's (see Photo 5). Outstanding SWPPP maintenance item/corrective actions recorded.
  - Weekly QSP inspections throughout the months of August and September 2024 continued to record the previously-identified damaged perimeter BMP's (wattles) originally identified on July 24<sup>th</sup> at SC2 and SC5, and the damaged stockpile coverings at SC2 as still outstanding and requiring maintenance/corrective actions (see Photos 6 and 7).

Currently, no BMP maintenance activities are scheduled due to the proximity of the reclamation timeline (reclamation process beginning in the coming weeks).

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).
  - No active nests were reporting during the subject period.
  - No nest failures due to Project activities were reported during the subject period.
  - No nest removals were conducted 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.
  - EPG conducted preconstruction nesting bird surveys on August 25<sup>th</sup>, 2024 for sensitive biological resources, specifically nesting raptors, with no findings of concern, during the subject reporting period at the following tower sites: M67-T5, M67-T6, M68-T1, M68-T2, M68-T3, M68-T4, M68-T5, M69-T1, M69-T2, M69-T3, and associated access roads and nearby structures. These surveys were conducted in accordance with the procedures and survey protocols outlined in the project's Nesting Bird Management Plan.
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.

<b>Table 2 – Minor Project Refinements and Temporary Extra Workspaces</b>			
<b>MPR/TEWS</b>	<b>Date Requested</b>	<b>Date Issued</b>	<b>Description</b>
<b>MINOR PROJECT REFINEMENTS (MPRs)</b>			
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.
<b>TEMPORARY EXTRA WORKSPACES (TEWS)</b>			
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.

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

## PHOTOS



**Photo 1:** Slightly damaged perimeter wattles at SC2 (representative of conditions at SC5), with holes as a result of animal damage. Photo courtesy of the July 24, 2024 QSP SWPPP inspection.



**Photo 2:** Damage to perimeter wattles, with a large split in the burlap covering at SC2. Photo courtesy of the July 24, 2024 QSP SWPPP inspection.



**Photo 3:** Damaged/large rip in stockpile covering (containing stockpiled soil) at SC2. Bags of gravel material put in place to secure the damaged covering also disintegrated. Photo courtesy of the August 7, 2024 QSP SWPPP inspection.



**Photo 4:** Damaged/large rip in stockpile covering (containing stockpiled soil) at SC2. The geo-text fabric has torn apart across the top edge of this stockpile. Photo courtesy of the August 7, 2024 QSP SWPPP inspection.



**Photo 5:** Significant damage to perimeter wattles at SC5, with a splits in the burlap covering, spill out of straw material, and loss of functionality as a BMP. Photo courtesy of the August 14, 2024 QSP SWPPP inspection.



**Photo 6:** Damaged/large rip in stockpile covering (containing stockpiled soil) remains unaddressed at SC2. The geo-tex fabric has torn apart across the top edge of this stockpile. Photo courtesy of the August 21, 2024 QSP SWPPP inspection.



**Photo 7:** Significant damage to perimeter wattles at SC5, with loss of functionality as a BMP. Outstanding SWPPP maintenance needed/corrective action required. Photo courtesy of the September 25, 2024 QSP SWPPP inspection.