

ELDORADO-LUGO-MOHAVE (ELM) SERIES CAPACITATOR PROJECT

Date: May 10, 2021
To: Eric Chiang, Project Manager, CPUC
From: Vida Strong, Aspen Project Manager
Subject: Monitoring Report #4: April 1 to 30, 2021

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, Elliot D’Antin, was onsite on April 8 and 12, 2021 and CPUC LEM, Jamie Miner, was onsite on April 8 and 29, 2021.

CPUC Notices to Proceed (NTPs)

Table 1 summarizes the NTPs issued for the Project by the CPUC, to date. Additional requests for NTP(s) are anticipated in May/June 2021.

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

Table 1. CPUC Notices to Proceed			
NTP	Date Requested	Date Issued	Description
NTP #3	04-29-2021	In Progress	<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 ▪ Staging Yard construction at Fenner Yard and Ludlow Alternative Yard

Construction & Compliance

A summary of construction and compliance activities is provided below by NTP.

NTP #1

Allowed construction activities under NTP #1 are summarized in Table 1 above. 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

Allowed construction activities under NTP #2 are summarized in Table 2 above. To date, all pre-compliance materials associated with NTP #2 have been approved by CPUC; however, construction activities associated with NTP #2 have yet to commence.

Summary of 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. Currently approved components associated with construction of the Ludlow Series Capacitor and adjacent materials yard are being performed by Beta-Siemens.
2. Construction activities that occurred at the Lugo Substation during the reporting period included staging equipment, trenching, drilling foundations, pouring concrete, installing conduit and ground wires, and conducting in-service testing (see Photo 1).
3. Construction activities that occurred at the Ludlow Series Capacitor during the reporting period included material deliveries, installing BMPs, installing and repairing desert tortoise fencing, grading, decompacting soils, and constructing concrete forms (see Photos 2 and 3).
4. To date, activities associated with the Lugo Substation and Ludlow Series Capacitor and Mid-Line are approximately 38 percent and seven percent complete, respectively.

Environmental Compliance

1. There were two Incident Reports issued during the reporting period.
 - **Incident Report.** From March 30 through April 6, 2021, a scraper was utilized at the Ludlow Series Capacitor that did not meet the requirements of APM AIR-02. The data log provided by SCE identified the equipment as possessing a 365-horsepower engine. It also listed the EPA engine level at

Tier 0. APM AIR-02 requires all off-road diesel equipment with a horsepower range between 100 and 750 to meet the EPA's Final Tier 4 Non-Road Engine Standards. The APM also provides exceptions in the event that a Tier 4 engine is not available. However, that exception is limited to a minimum of utilizing a Tier 1 engine if higher tier levels are not available. Therefore, the use of a Tier 0 engine was not compliant with APM AIR-02. Further, SCE did not provide documentation of the unavailability of equipment that meets the EPA Standards prior to its use to demonstrate compliance with APM AIR-02.

- **Incident Report.** On April 2 and 3, 2021 SCE conducted surveys for golden eagle and indicated that active nests had been identified during those surveys. MM BR-10 requires the implementation of a Nesting Bird Management Plan (NBMP). Section 3.5 of the NBMP states, "New nest events will be entered into FRED and agency biologists will be notified by automated email within 24 hours." Further, Attachment C of the Mitigation Monitoring, Compliance, and Reporting Plan (MMCRP) states, "SCE shall implement the NBMP, including reporting any nest locations to CPUC EMs on a daily and weekly basis." The data associated with active nests identified during the eagle surveys had yet to be entered into FRED and provided to the CPUC EMs as of April 8, 2021, well beyond the 24-hour window required under the NBMP and the MMCRP.
2. There were two SCE self-reported incidents documented during the reporting period.
 - On April 6, 2021, the SCE Environmental Coordinator issued a Level 1 Non-Compliance Incident for a non-compliance piece of heavy equipment used at the Ludlow Series Capacitor Sites. This incident was also identified by the CPUC EM and a CPUC Non-Compliance Report was issued on April 7, 2021 (see Table 2 below).
 - On April 14, 2021, SCE issued a Level 1 Non-Compliance Incident for failure to report data associated with golden eagle surveys within the required timeframe. This incident was also identified by the CPUC LEM and a CPUC Non-Compliance Report was issued on April 8, 2021 (see Table 2 below).
 3. There were no SWPPP maintenance items or corrective actions associated with NTP #1 recorded during the reporting period. To date, there are no open SWPPP maintenance items or corrective actions associated with NTP #1.
 4. There were no reportable (>1 gallon) and one non-reportable (<1 gallon) spills associated with NTP #1 identified during the reporting period. The non-reportable spill occurred at the Lugo Substation on April 7, 2021 and consisted of a small amount of ground staining from a minor hydraulic fluid leak. According to SCE, the contaminated material was properly removed from the site.
 5. As of the end of the reporting period, there were 47 active nests (common raven, red-tailed hawk, golden eagle) located within work areas under CPUC oversight. If required, nest management, including establishment of buffers and the removal of inactive non-special-status bird species' nests, is being implemented per the requirements of the project Nesting Bird Management Plan (NBMP). There were no nest removals reported within work areas under CPUC oversight during the reporting period.
 6. Special-status species observed during the reporting period included chuckwalla, desert tortoise, loggerhead shrike, prairie falcon, northern harrier, Swainson's hawk, and golden eagle.

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

There were no MPRs or TEWS requested or approved during the reporting period.

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

Table 2 summarizes the CPUC Project Memorandum and Incident Reports issued since the start of construction.

Table 2. – 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	<ul style="list-style-type: none"> ▪ 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	<ul style="list-style-type: none"> ▪ 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	<ul style="list-style-type: none"> ▪ Data associated with golden eagle surveys and potential nesting sites was not provided to the CPUC within the required timeframe.
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.

PROJECT PHOTOGRAPHS



Photo 1: Drilling for foundations at the Lugo Substation. April 14, 2021. Photo courtesy of SCE.



Photo 2: Grading activities occurring at the Ludlow Series Capacitor site. April 29, 2021.



Photo 3: Forming concrete pads at the Ludlow Series Capacitor. April 29, 2021.