

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE
STATE OF CALIFORNIA**

In the Matter of the Application of SOUTHERN
CALIFORNIA EDISON COMPANY (U 338-E)
for a Permit to Construct Electrical Facilities:
Eldorado-Lugo-Mohave Series Capacitor Project.

Application No. 18-05-007
(Filed May 2, 2018)

**SOUTHERN CALIFORNIA EDISON COMPANY'S (U-338-E) SUPPLEMENTAL
REPLY BRIEF**

BETH GAYLORD
TAMMY JONES

Attorney for
SOUTHERN CALIFORNIA EDISON COMPANY

2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California 91770
Telephone: (626) 302-6634
Facsimile: (626) 302-1910
E-mail: tammy.jones@sce.com

Dated: **October 26, 2018**

STATE OF CALIFORNIA

In the Matter of the Application of SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) for a Permit to Construct Electrical Facilities: Eldorado-Lugo-Mohave Series Capacitor Project.

Application No. 18-05-007
(Filed May 2, 2018)

**SOUTHERN CALIFORNIA EDISON COMPANY’S (U-338-E) SUPPLEMENTAL
REPLY BRIEF**

I.

INTRODUCTION

The Eldorado Lugo Mohave Project (ELM Project) is needed to relieve deliverability constraints in the Desert Constraint Area¹ for the purpose of integrating renewable generation, as mandated by the California Renewable Portfolio Standard (RPS)². Because the ability to deliver power is currently constrained by the limitations of existing infrastructure, the California Independent System Operator (CAISO) approved, in its annual Transmission Planning Process (TPP), upgrades to the series capacitors on the Eldorado-Lugo (2012-2013 TPP) and Lugo-Mohave (2013-2014 TPP) 500 kilovolt (kV) transmission lines³. To meet the CAISO TPP

¹ The “Desert Area Constraint” has been identified by the California Independent System Operator (CAISO) to include a group of deliverability constraints that impact the desert area. These constraints limit deliverability in a wide electrical area that covers several renewable zones. Generators interconnecting within these renewable zones contribute to the constraint. (SCE’s Proponent Environmental Assessment (PEA) at 2-1.)

² <http://www.energy.ca.gov/portfolio>.

³ See SCE response to ORA Data Request Set: A1805007 ORA-SCE-ELM-001 Questions 1 and 3; see also PEA at 2-1.

requirements, Southern California Edison (SCE) subsequently developed and proposed the ELM Project which includes: 1) the installation of a new 500 kV series capacitor between the two terminal substations of each of the Eldorado-Lugo 500 kV transmission line and the Lugo-Mohave 500 kV transmission line; 2) the modification of existing transmission facilities to address potential overhead clearance discrepancies; 3) the replacement of approximately 235 miles of existing overhead ground wire (OHGW) with optical ground wire (OPGW); and 4) modifications within the existing Eldorado, Lugo and Mohave Substations to accommodate the new series capacitors.

The Public Advocates Office of the California Public Utilities Commission (PAO)⁴ filed a protest against the ELM Project (PAO Protest), arguing that SCE should have filed an application for a Certificate of Public Convenience and Necessity (CPCN), rather than an application for a Permit to Construct (PTC) because SCE is proposing to construct “new 500 kV transmission line facilities”.⁵ In response to PAO’s protest, SCE has provided ample evidence demonstrating that SCE is not constructing “major transmission line facilities” - the trigger for a CPCN⁶. Rather, SCE has consistently maintained that replacing the existing OHGW with OPGW does not qualify as a “transmission line facility exceeding 200 kV” as OHGW has no voltage. Additionally, modifying certain towers to address potential overhead clearance discrepancies or to accommodate the OPGW work does not qualify as major transmission line facility construction. Similarly, and contrary to PAO’s assertions, a series capacitor is not a transmission line facility and accordingly, a CPCN is not required. However, because a series

⁴ The Office of Ratepayer Advocates was renamed the Public Advocates Office of the Public Utilities Commission pursuant to Senate Bill No. 854, which was signed by the Governor on June 27, 2018 (Chapter 51, Statutes of 2018).

⁵ PAO Protest at 2.

⁶ See *A.10-11-012 (In the Matter of the Application of Southern California Edison Company) (U338E) for a Permit to Construct Electrical Facilities: Red Bluff Substation Project.*; see also, G.O. 131-D III.A (requiring a CPCN for the construction of “major electric transmission line facilities which are designed for eventual operation at 200 kV or more”).

capacitor has physical characteristics similar to a substation and contains similar equipment, SCE filed an application for a PTC for the ELM Project.

PAO also now asserts that SCE has bordered on committing a Rule 1.1 violation for certain statements SCE made in its June 11, 2018 reply to ORA's protest (Protest Reply)⁷, namely that series capacitors are functionally equivalent to substations, that the OPGW is like-for-like replacement of the OHGW, and that the 500 kV tower modifications are minor. To the extent SCE was unartful in its use of certain language in the Protest Reply, SCE already clarified these statements in both its June 11, 2018 Reply to the Office of Ratepayer Advocates Response (Response Reply)⁸ and in Southern California Edison's Supplemental Brief, dated October 12, 2018⁹ (Supplemental Brief). Notwithstanding these clarifications, SCE still maintains that the series capacitors are not transmission line facilities, the OPGW is also not a major transmission line facility and that the 500 kV tower modifications are minor and also not major transmission line facilities. Consequently, no CPCN is required for the ELM Project. As demonstrated below, PAO's arguments are flawed on multiple levels and SCE has provided ample evidence to show that the ELM Project should require a PTC and not a CPCN.

II.

DISCUSSION

As discussed in SCE's Protest Reply, SCE's Response Reply, SCE's Supplemental Brief and more fully below, the ELM Project does not require a CPCN because it does not involve the construction of major transmission line facilities. Rather, the facilities that are proposed as part of the ELM Project are either not transmission line facilities at all or they are minor pursuant to the CPUC's decision in *Red Bluff*.

⁷ Southern California Edison Company's (U-338-E) Reply to Office of Ratepayer Advocates' Protest.

⁸ Reply of Southern California Edison Company (U-338-E) to the Office of Ratepayer Advocates' Response to Southern California Edison's Reply to the Office of Ratepayer Advocates' Protest at pp. 2-5, Section III A.

⁹ Southern California Edison Company's (U-338-E) Supplemental Brief at pp. 7-12, Sections B and C.

A. The ELM Project Does Not Trigger A CPCN Because There Is No Construction Of Major Transmission Line Facilities.

In its opening brief, PAO cites to the CPUC's decision in *Alberhill*¹⁰ to demonstrate that the ELM Project triggers a CPCN. But the *Alberhill* decision is not instructive on the issue of what constitutes a "major" transmission facility. Rather, SCE has suggested that the more appropriate precedent is the decision in *Red Bluff*¹¹, which was rendered one year after *Alberhill*. Just as in *Alberhill*, *Red Bluff* involved the construction of a new 500 kV substation, associated 500 kV transmission line segments to "loop-in" the new substation, and the installation of OPGW and other telecommunication facilities. Also, just as in *Alberhill*, PAO argued that because the project involved the construction of facilities over 200 kV, it should automatically require a CPCN rather than a PTC. After considering the facts; however, the CPUC held that it is necessary to review the relevant portions of G.O. 131-D in the context of the overall project when determining which permit applies. In doing so, the CPUC determined that "in view of the context of the overall project, the transmission loop-ins are not "major" facilities that require a CPCN¹².

PAO argues that the "transmission portion" of the ELM Project includes the replacement of OHGW with OPGW, the existing tower modifications, and the installation of the two series capacitors. But as SCE has repeatedly maintained, this type of work is not considered the construction of major transmission line facilities pursuant to *Red Bluff*. Pursuant to PAO's arguments, even minor work would require that the utility go through a permitting process that could take years. But, *Red Bluff* is just one example where a project involved the construction of

¹⁰ A.09-09-22, *In the Matter of the Application of Southern California Edison Company (U338E) for a Permit to Construct Electrical Facilities: Alberhill Substation Project, Assigned Commissioner's Ruling Directing Caption Modification*, dated March 3, 2010.

¹¹ A.10-11-012, *In the Matter of the Application of Southern California Edison Company (U338E) for a Permit to Construct Electrical Facilities: Red Bluff Substation Project, Assigned Commissioner's Scoping Memo and Ruling*, dated February 25, 2011.

¹² *Id.* at 6.

brand new transmission line facilities (i.e., the loop-in-lines ranging between 2,500 and 3,500 feet long each) and it was held that the work did not trigger a CPCN. This is precisely why *Red Bluff* held it was important to consider the relevant portions of G.O. 131-D in the context of the overall project when determining which permit applies.

1. **The Replacement of OHGW with OPGW Is Not The Construction Of A Major Transmission Line Facility.**

PAO argues that the replacement of OHGW with OPGW is the construction of a major transmission line facility and requires a CPCN under GO 131-D, Section III.A. However, Section III.A. only applies to major transmission line facilities which are designed for immediate or eventual operation at 200 kV or more. Although OPGW will replace the existing OHGW on 500 kV lines, the OPGW is not a transmission line facility with any voltage over 200 kV. It serves a telecommunication function. The grounding function of the OPGW is the same as the existing OHGW and therefore an equivalent replacement. As is clear from the plain language of GO 131-D, Section III.A., the CPUC intended CPCNs to apply to the construction of transmission line projects composed of energized conductor at over 200 kV and the support structures for such conductor. No mention of telecommunication facilities appears in Section III.A. or elsewhere in GO 131-D. The fact that G.O. 131-D is silent on these types of facilities makes sense as the CPUC clearly could not have intended to sweep every type of project even tangentially related to a transmission line into the CPCN process. This is reinforced by the CPUC's statement in the decision implementing G.O. 131-D, in which it was noted that "we do not want to unnecessarily hinder the utilities' ability to modify their systems to meet the needs of the customers they serve. The utilities make hundreds of modifications to their power lines and distribution systems every year, and not all of these projects require regulatory oversight."¹³

In the event the Commission determines that OPGW is an electric transmission line facility, it is not a "major" transmission line facility under *Red Bluff*. Here, the OPGW is

¹³ D. 94-06-014 at 17.

replacing existing OHGW on existing structures. No energized conductor is being installed and no new towers are being constructed to effectuate the installation. Moreover, the environmental impacts from such work is expected to be limited to minimal temporary disturbance. To require a CPCN for this type of work would trigger an extensive permitting process for a minor facility replacement. Applying *Red Bluff* to a hypothetical is instructive. If SCE were to propose installing OPGW, but to do so would require SCE to replace every tower on the 235 mile line, it may make sense to determine that SCE obtain a CPCN for the project. Under this hypothetical, the extensive CPCN process may be appropriate because the replacement of hundreds of towers could involve significant costs and environmental impacts that may necessitate additional analysis.

Lastly, if the Commission determines that the OPGW is a major transmission facility that triggers a CPCN then certain CPCN exemptions would be applicable. As further recognition that not all activities associated with transmission line facilities require permitting, G.O. 131-D explicitly exempts certain activities from requiring a CPCN, including “the replacement of existing power line facilities or supporting structures with equivalent facilities¹⁴ or structures, the minor relocation of existing power line facilities, the conversion of existing overhead lines to underground, *or the placing of new or additional conductors, insulators, or their accessories on or replacement of supporting structures already built.*”¹⁵ Accordingly, even if it were determined that the replacement of OHGW with OPGW somehow is the construction of a major transmission line facility, it would still be exempt under the foregoing provision.

¹⁴ SCE also maintains that the OPGW qualifies as an “equivalent facility” to the OHGW as it is a wire installed at the top of the transmission towers and functions as a ground. The fact that the OPGW also includes fiber optic strands and is approximately 1/4 inch bigger than the OHGW (*See* SCE response to PAO Data Request No. 5) should not disqualify the OPGW from being equivalent to OHGW.

¹⁵ G.O. 131-D, Section III.A.

2. **The Modification of Towers Is Not The Construction of a Major Transmission Facility Triggering a CPCN.**

The ELM Project was designed to minimize impacts, and to utilize existing rights-of-way and structures. As a result, while the ELM Project necessitates the raising of nine existing towers to address line clearance issues, the other modifications to existing towers described in SCE's Proponents Environmental Assessment (PEA) are all minor modifications to replace damaged steel or reinforce steel components of the structures and to provide for the attachment of the OPGW¹⁶. These modifications; however, do not involve raising the towers. In the PEA's description of "Lattice Steel Tower Modifications", the "raising towers" and the "minor bracing reinforcement" for OPGW are described.¹⁷ The count of towers to be raised versus reinforced is contained in Attachments 3-A (raised) and 3-B (reinforced) of the PEA. These modifications to existing structures would not trigger a CPCN. In fact, G.O. 131-D, Section III.A. exempts the complete replacement of supporting structures already built from the requirement to obtain a CPCN, so modifications to existing towers should not trigger this obligation.¹⁸ Moreover, PAO's assertion that SCE may make major modifications to 59 towers is wholly unsupported by

¹⁶ PAO incorrectly implies that SCE may be raising the height of 59 towers, but this is clearly refuted in the PEA (PEA at 3-75, 76 and Attachments 3A and 3B) as well as in SCE's Response Reply (Declaration of Selya Arce).

¹⁷ PEA at 3-75, 76.

¹⁸ The raising of existing towers through the use of body or leg extensions is far less costly and less impactful from an environmental perspective than constructing new towers over 200kV (as is typically approved in PTC applications as a minor modification to transmission facilities). These new towers approved in PTC proceedings are up to 40 feet taller than the existing towers replaced in the case of *Red Bluff*. For example, see Desert Sunlight Final EIS <https://www.energy.gov/sites/prod/files/EIS-0448-FEIS-01-2011.pdf> at pages 2-27; and Mesa Substation Project PEA <http://www.cpuc.ca.gov/Environment/info/ene/mesa/attachment/A1503003%20Mesa%20-%20SCE%20MESA%20PEA%20Volume%201%20of%204.pdf> at pages 2-23,24 and Table 3-1 which involved 35 replacement 220kV and 500kV towers up to 200 feet tall. If building dozens of new towers for a new substation under a PTC does not trigger a CPCN then neither should raising nine existing towers.

any evidence and contrary to the description contained in the PEA and responses provided by SCE to PAO.

3. The Series Capacitors Do Not Require a CPCN

As SCE has continually maintained, a series capacitor is not a major transmission line facility. Rather, a series capacitor has a similar physical footprint, contains similar types of equipment and has similar environmental impacts as a typical substation would have¹⁹. Accordingly, a series capacitor should be treated as a substation for permitting purposes and PAO has provided little evidence to suggest otherwise²⁰.

Now PAO argues that since series capacitors are *modeled* as “transmission line segments” they should be considered transmission line segments²¹. But just because a series capacitor can be modeled as a transmission line segment does not make it a transmission line. Rather, modeling a series capacitor as a segment is just one of several ways in which a series capacitor can be modeled; the purpose of which is to show where the impedances are on various portions of the transmission line. So, for instance, an impedance could be modeled representing the transmission line as a segment and then another impedance (of negative value) could be modeled as a separate segment if you were to add series capacitors to that line. But the series capacitors themselves are not the transmission line, but rather are included within the tables of the software used to perform power flow studies; which in this case is General Electric’s Positive Sequence Load Flow software. In effect, it simply represents a label resulting from the convenient method to model the series capacitor for power flow studies.

¹⁹ In support of SCE’s argument, SCE attached the Declaration of Selya Arce to its Response Reply which explained in detail the similarities between a substation and a series capacitor. PAO presumably does not disagree with this evidence as they have yet to respond or provide any contrary evidence.

²⁰ PAO’s sole evidence was a declaration by Ken Lewis noting the differences between a substation and a series capacitor. SCE has since provided contrary evidence to show the similarities between the two facilities and PAO has not contradicted that evidence or provided anything further.

²¹ PAO Opening Brief at 7.

Similarly, PAO's argument that a CPCN is required to analyze the costs of the ELM Project is misplaced. There is no cost threshold in GO 131-D triggering a CPCN versus a PTC. As has been noted previously, G.O. 131-D provides that all substations with a high side voltage greater than 50 kV are permitted under the PTC rules in accordance with G.O. 131-D, Section III.B. This includes substation projects such as SCE's 500 kV Mesa Substation Project²², which was recently approved by the CPUC as a PTC. The cost for the Mesa Project is projected to be approximately \$561 million in 2015 constant dollars; well in excess of the projected ELM Project costs. The cost of the Mesa Project did not transform it from a PTC to a CPCN licensed project. Further, while PAO suggests that the ELM Project costs require additional scrutiny, PAO's citations only serve to demonstrate how the project costs have gone down over time.²³

III.

CONCLUSION

For the reasons stated above, the ELM Project was properly filed as an application for a PTC and ORA's protest should be rejected in its entirety.

²² A.15-03-003 *In the Matter of the Application of Southern California Edison Company (U338E) for a Permit to Construct Electrical Facilities: Mesa 500 kV Substation Project.*

²³ The costs of the ELM Project have decreased over time as SCE has refined its engineering. As noted in PAO's Opening Brief, in 2016, the ELM Project costs were expected to be \$300M in 2016. In 2017, those costs were adjusted to \$269M and in 2018, they were adjusted to \$225M. (PAO Opening Brief at 5.) PAO also cites to the CAISO 2012-2013 TP and 2013-2014 TP as additional evidence, however, those reports do not contain any mention of right-of-way acquisition costs.

Respectfully submitted,
TAMMY JONES

/s/ Tammy Jones

By: Tammy Jones

Attorney for
SOUTHERN CALIFORNIA EDISON COMPANY

2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California 91770
Telephone: (626) 302-6634
Facsimile: (626) 302-1910
E-mail: tammy.jones@sce.com

October 26, 2018

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE
STATE OF CALIFORNIA**

In the Matter of the Application of SOUTHERN
CALIFORNIA EDISON COMPANY (U 338-E)
for a Permit to Construct Electrical Facilities:
Eldorado-Lugo-Mohave Series Capacitor Project.

Application No. 18-05-007
(Filed May 2, 2018)

CERTIFICATE OF SERVICE

I hereby certify that, pursuant to the Commission's Rules of Practice and Procedure, I have this day served a true copy of **SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E) SUPPLEMENTAL REPLY BRIEF**, on all parties identified on the attached service list(s) for **A.18-05-007**. Service was effected by one or more means indicated below:

- Transmitting the copies via e-mail to all parties who have provided an e-mail address.
- Placing the copies in sealed envelopes and causing such envelopes to be delivered by U.S. Mail to the offices of the Commissioner(s) or other addressee(s).

**ALJ Jason Jungreis
CPUC - Division of ALJs
505 Van Ness Avenue
San Francisco, CA 94102**

Executed this **October 26, 2018**, at Rosemead, California.

/s/ Kelly Morikawa Kwong

Kelly Morikawa Kwong

Legal Administrative Assistant

SOUTHERN CALIFORNIA EDISON COMPANY

2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California 91770



California
Public Utilities
Commission



[CPUC Home](#)

CALIFORNIA PUBLIC UTILITIES COMMISSION

Service Lists

PROCEEDING: A1805007 - EDISON - FOR A PERMI
FILER: SOUTHERN CALIFORNIA EDISON COMPANY
LIST NAME: LIST
LAST CHANGED: SEPTEMBER 7, 2018

[Download the Comma-delimited File](#)
[About Comma-delimited Files](#)

[Back to Service Lists Index](#)

Parties

TAMMY JONES
 SR. ATTORNEY
 SOUTHERN CALIFORNIA EDISON COMPANY
 2244 WALNUT GROVE AVE./ PO BOX 800
 ROSEMEAD, CA 91770
 FOR: SOUTHERN CALIFORNIA EDISON COMPANY

NICHOLAS SHER
 CALIF PUBLIC UTILITIES COMMISSION
 LEGAL DIVISION
 ROOM 4300
 505 VAN NESS AVENUE
 SAN FRANCISCO, CA 94102-3214
 FOR: PUBLIC ADVOCATES OFFICE (FORMERLY
 THE OFFICE OF RATEPAYER ADVOCATES) ORA

Information Only

CASE ADMINISTRATION
 SOUTHERN CALIFORNIA EDISON COMPANY
 8631 RUSH STREET
 ROSEMEAD, CA 91770

DONALD C. LIDDELL
 ATTORNEY
 DOUGLASS & LIDDELL
 2928 2ND AVENUE
 SAN DIEGO, CA 92103

BILLIE C. BLANCHARD
 CALIF PUBLIC UTILITIES COMMISSION
 INFRASTRUCTURE PLANNING AND PERMITTING B
 AREA 4-A
 505 VAN NESS AVENUE
 SAN FRANCISCO, CA 94102-3214

CHLOE LUKINS
 CALIF PUBLIC UTILITIES COMMISSION
 ENERGY SAFETY & INFRASTRUCTURE BRANCH
 ROOM 4102
 505 VAN NESS AVENUE
 SAN FRANCISCO, CA 94102-3214

DAVID PECK
 CALIF PUBLIC UTILITIES COMMISSION
 PRESIDENT PICKER

FIDEL LEON DIAZ
 CALIF PUBLIC UTILITIES COMMISSION
 ENERGY SAFETY & INFRASTRUCTURE BRANCH

ROOM 4108
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

AREA
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

GREGORY HEIDEN
CALIF PUBLIC UTILITIES COMMISSION
LEGAL DIVISION
ROOM 4300
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

JOSEPH A. ABHULIMEN
CALIF PUBLIC UTILITIES COMMISSION
ENERGY SAFETY & INFRASTRUCTURE BRANCH
ROOM 4209
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

KENNETH LEWIS
CALIF PUBLIC UTILITIES COMMISSION
ENERGY SAFETY & INFRASTRUCTURE BRANCH
AREA
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

State Service

JASON JUNGREIS
CALIF PUBLIC UTILITIES COMMISSION
DIVISION OF ADMINISTRATIVE LAW JUDGES
ROOM 5043
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214

[TOP OF PAGE](#)

[BACK TO INDEX OF SERVICE LISTS](#)