# **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 Certificate of Public Convenience and Necessity Regarding the Eldorado-Lugo-Mohave Series Capacitor Project.

Application No. 18-05-007

# AMENDED APPLICATION OF SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY REGARDING THE ELDORADO-LUGO-MOHAVE SERIES CAPACITOR PROJECT

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Date: April 19, 2019

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# I.

#### **INTRODUCTION**

On May 2, 2018, Southern California Edison Company (SCE) filed Application 18-05-007 (Application) for a Permit to Construct the Eldorado Lugo Mohave Series Capacitor Project (ELM Project or Proposed Project). SCE filed its Proponent's Environmental Assessment (PEA) for the ELM Project concurrently with the Application.

On August 24, 2018, a Prehearing Conference was held for the ELM Project followed by briefing regarding whether the Application was properly filed as a Permit to Construct (PTC) application rather than an application for a Certificate of Public Convenience and Necessity (CPCN). On January 9, 2019, the Commission issued Assigned Commissioner's Ruling Ordering Applicant To File Amended Application And Directing Caption Modification (Ruling).

Per the Ruling, SCE is required to amend its Application and to refile as a CPCN Application (Amended Application). This Amended Application seeks a CPCN for the ELM Project. Certain amendments to the Application, in addition to the caption modification, are required at this time to account for additional elements required for a CPCN versus a PTC and to

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update information that has changed since the Application was filed. Consequently, this Amended Application includes the following new or amended appendices:

- Appendix A: Balance Sheet and Statement of Income (amended)
- Appendix B: Incorporated Cities and Counties (amended)
- Appendix C: Project Plan (new) includes: Project Implementation Plan, Construction Management Plan, Cost Control Plan, and Project Schedule including ROW Acquisition
- Appendix D: Notice of CPCN Application,<sup>1</sup> (amended) which includes an amended 300-foot list, and agency and interested party lists
- Appendix E: SCE PTC Application dated May 2, 2018
- Appendix F: Field Management Plan excerpt (minor amendment for scope only)
- Appendix G: Articles of Incorporation (new)
- Appendix H: Competing Entities (new)
- Appendix I: Annual Revenue Requirement (new)
- Appendix J: Estimated Project Cost (new)
- Appendix K: Permit List (new)

Additional modifications to the Application are noted herein with underlined text for additions and with strikethrough for text that is deleted. Unless otherwise noted, all remaining portions of the Application remain unchanged and are incorporated by reference herein. A copy of SCE's original Application is also attached hereto as Appendix "E".

CPUC Rule 2.6 states "unless otherwise provided by rule, decision, or General Order, a protest or response must be filed within 30 days of the date the notice of the filing of the application first appears in the Daily Calendar." GO 131-D provides under Section XII that protests are due 30 days after the notice was mailed or published. Since SCE will mail the notices on April 19, 2019, SCE calculates that any protests will be due May 20, 2019.

#### II.

#### PROJECT SCOPE AND BACKGROUND

SCE's Proposed Project was approved by the California Independent System Operator's (CAISO) Transmission Planning Process as a policy-driven upgrade in the 2012-2013 and 2013-2014 Transmission Plans. As a policy-driven upgrade, the purpose of the Proposed Project is to integrate renewable generation by relieving deliverability constraints within what is referred to as the Desert Area.<sup>2</sup> The Desert Area is an electrical region comprised of several renewable zones, also referred to as Competitive Renewable Energy Zones (CREZs), which represent the geographic areas within which renewable resources and development potential are expected and align with the CPUC's identified Renewables Portfolio Standard (RPS).

The capability of SCE's existing infrastructure serving the Desert Area, namely the Eldorado-Lugo and Lugo-Mohave 500 kV transmission lines, is limited by the existing capacitors and terminal equipment at the Eldorado, Lugo and Mohave Substations, and needs to be upgraded to meet the Proposed Project's objectives by increasing the import capability of these existing transmission lines. In addition, new mid-line series capacitors will be needed.<sup>3</sup> Figure 1-1: Proposed Project Location in Chapter 1, PEA Summary<sup>4</sup> shows the location of the Proposed Project in relation to the larger regional area.

<sup>&</sup>lt;sup>2</sup> The deliverability constraint that affects the Desert Area is referred to as the Desert Area Constraint in the 2013-2014 CAISO Transmission Plan (Section 4.3.2, p. 196.) The Desert Area Constraint limits deliverability in a wide electrical area that covers several renewable zones. Generators interconnecting within these renewable zones contribute to the constraint. The need for transmission upgrades to relieve the Desert Area Constraint is analyzed for other renewables portfolios by comparing the generation behind the deliverability constraint. The CAISO analyzes this constraint as part of its annual transmission planning process.

<sup>&</sup>lt;sup>3</sup> Typically, series capacitors are installed at the ends of the lines, inside of the terminating substations. In the case of the Proposed Project, this approach is not feasible due to the length of the lines and the amount of series compensation required. The Proposed Project's mid-line series capacitors are being installed between the ends (mid-line) of the existing Eldorado-Lugo and Lugo-Mohave 500 kV transmission lines to effectively provide series compensation for the very long transmission lines. This design distributes the series compensation (capacitance) along the length of the lines and keeps the voltage within allowable limits throughout their length.

<sup>4 &</sup>lt;u>See PEA at: http://www.cpuc.ca.gov/environment/info/aspen/elm/toc-pea.htm.</u>

The Proposed Project consists of the following major components:

- Construct two new 500 kV mid-line series capacitors (i.e., the proposed Newberry Springs Series Capacitor and Ludlow Series Capacitor) and associated equipment
- Relocate, replace, or modify 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 potential overhead clearance discrepancies
- Perform minor grading at two overhead clearance discrepancy locations along the Lugo-Mohave 500 kV Transmission Line
- Extend or reroute approximately 2 miles of overhead and approximately 700 feet of underground 12 kV distribution circuits to provide station light and power to the proposed Newberry Springs Series Capacitor and Ludlow Series Capacitor (the distribution poles would support the overhead telecommunication facilities on the same route)
- Install distribution facilities to provide station light and power to three proposed fiber optic repeater sites
- Install approximately 235 miles of OPGW (173 miles on the Lugo-Mohave 500 kV Transmission Line, approximately 59 miles on the Eldorado-Mohave 500 kV Transmission Line, and approximately 3 miles of underground telecommunications facilities in the vicinity of Mohave Substation)
- Modify the ground wire peak of existing suspension towers used as splice locations for the OPGW work; some of these towers would also require minor modifications to the steel in the tower body
- Install approximately 2 miles of overhead and approximately 500 feet of underground telecommunications facilities to connect the proposed Newberry Springs Series Capacitor and Ludlow Series Capacitor to SCE's existing system as

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one communication path (the telecommunications facilities would share the same poles with overhead distribution)

- Install approximately 2 miles of underground telecommunications facilities to connect the proposed Newberry Springs Series Capacitor and Ludlow Series Capacitor to SCE's existing system as a second communication path
- Install underground telecommunications facilities from existing transmission structures to three fiber optic repeater sites—Barstow, Kelbaker, and Lanfair—within the Lugo-Mohave 500 kV Transmission Line right-of-way (ROW)
- Install approximately 1,000 feet of underground telecommunications facilities within the existing Lugo, Mohave, and Eldorado Substations
- Perform modifications within the existing Lugo Substation on the existing series capacitors and install new terminating equipment; remove two existing TSPs within the substation and install two new TSPs within the substation on the Eldorado-Lugo and Lugo-Mohave 500 kV Transmission Lines
- Perform modifications within the existing Eldorado Substation on the existing series capacitors and upgrade the terminal equipment on the Eldorado-Lugo 500 kV Transmission Line
- Replace existing series capacitors on the Lugo-Mohave 500 kV Transmission Line, and install new terminal equipment on the Eldorado-Mohave and Lugo-Mohave 500 kV Transmission Lines at the existing Mohave Substation
- Install five new 500 kV 63kA circuit breakers at LADWP's McCullough Substation
- Install mitigation such as cathodic protection and grounding, if needed, as a result of any induced alternating current effects the increased power flow might have on nearby gas transmission pipelines.

Construction of the Proposed Project is scheduled to begin in Q1, 20<del>19</del>-2020 and to be completed by June <del>2020</del> 2021. <u>A schedule for the Proposed Project is included in this</u> <u>Application as Appendix "C".</u>

# ADDITIONAL INFORMATION REGARDING PROJECT NEED AND MODIFICATIONS OF CERTAIN PROJECT OBJECTIVES.

III.

#### A. <u>Project Need</u>

<u>The Project need has evolved since originally approved by the CAISO Transmission</u> <u>Planning Process (TPP) and since SCE filed its original Application. In particular, the California</u> <u>RPS requirements have increased from 33% to 60%, and many generators with constructed or in-</u> <u>progress projects who need Full Capacity Deliverability Status (FCDS) to meet their contractual</u> <u>obligations depend on the Project for that FCDS.</u>

Pursuant to the RPS, the CPUC and the California Energy Commission (CEC) provided what are referred to as "Portfolios" to the CAISO for use within its annual TPP. A Portfolio is comprised of a mix of resources, including renewable energy, which is modeled based on a defined set of assumptions developed between the CPUC and the CEC through a public process including the CAISO. The Portfolios are meant to reflect the state's renewable policy goals and provide a projection of where renewable resources are expected to develop to meet the state's RPS. Once the Portfolios are created and reviewed through the public process, the CPUC and CEC jointly submit the Portfolios to the CAISO for incorporation into the TPP. It is through this process that the CAISO can recommend approval for transmission upgrades necessary to support the requirements of the RPS. It is also through this process that the CAISO approved the Project as a policy-driven transmission solution in order to support the requirements of the RPS.

The Proposed Project is also needed for the generation projects identified in Tables 2-1 and 2-2 of the PEA to achieve FCDS as outlined in their respective Interconnection Agreements and/or Upgrade Facilities Agreements. Without the Proposed Project, these generation interconnection projects would be left without a CAISO-approved upgrade that would otherwise provide for the additional transmission capacity that would allow them to receive FCDS. Each of these identified projects may be directly affected by not being able to achieve their requested

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deliverability status, which could have a direct impact on its contractual obligations as part of its Power Purchase Agreement (PPA). Typically, until a project is granted FCDS, it cannot qualify for Resource Adequacy, which limits its ability to participate in the CAISO market as a reliable and dependable resource.

In particular the Proposed Project will enable generation resources located within the East of Pisgah (EOP) area<sup>5</sup>, in addition to those located within other CREZs that have requested to interconnect to the electrical transmission grid, to achieve FCDS. This renewable power that will be imported into the entire CAISO grid, including the Los Angeles Basin through the increased transmission capacity would be deemed useful because its purpose would be to serve retail load within the CAISO grid, including SCE service territory as outlined by the RPS. Without the Proposed Project, the amount of renewable energy designated as fully deliverable would be limited.

Moreover, the Portfolios submitted to the CAISO by the CPUC and CEC as part of the <u>RPS required<sup>6</sup> that all new generation resources be fully deliverable as detailed within the</u> <u>CPUC's RPS Calculator Guide.<sup>7</sup> It was under this assumption that generation projects applying</u> for fully deliverability within the area served by the Project, signed interconnection agreements with the contractual obligation that they would be granted FCDS following completion of the Proposed Project.

# B. <u>Modification of Project Objectives</u>

The Application lists the following Proposed Project objectives:8:

<sup>&</sup>lt;sup>5</sup> <u>The EOP area is comprised of the transmission facilities located east of the SCE Pisgah Substation</u> including those owned and operated by SCE, GridLiance West Transco (GWT), and Valley Electric Association (VEA). The EOP Area includes portions of the Mountain Pass and El Dorado CREZ.

<sup>&</sup>lt;u>http://www.docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M155/K277/155277948.PDF, at p.42.</u>

<sup>&</sup>lt;sup>2</sup> <u>http://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=10349 (version 6.2) at pg A-17, "In prior versions of the RPS Calculator (v.1.0 – v.6.0), all new renewable resources were assumed to have full capacity deliverability status (FCDS)".</u>

<sup>&</sup>lt;u>8</u> See Application attached as Appendix "E" at pp. 4-5.

- Meet the planned in-service date of June 2020 in an effort to meet the requirements as outlined and required by the California Renewables Portfolio Standard (RPS) for SCE to serve as least 33 percent of its retail load with renewable energy by 2020 (footnote omitted);
- Ensure compliance with CPUC G.O. 95 and the NESC;
- Continue to provide safe and reliable electric service;
- Maintain system reliability within the Los Angeles Basin, which is defined as the Electrical Needs Area (ENA);
- Increase power flow through the existing Eldorado-Lugo, Eldorado-Mohave, and Lugo-Mohave 500 kV Transmission Lines for the purpose of increasing the amount of power delivered from California's Ivanpah Valley, Nevada, and Arizona to the ENA through the SCE system in an effort to meet the requirements associated with the California RPS;
- Reduce SCE's power flow into the LADWP transmission system for the purpose of mitigating power flow overloads under normal and abnormal system conditions (footnote omitted);
- Ensure compliance with all applicable reliability planning criteria required by the North American Electric Reliability Corporation (NERC), Western Electricity Coordinating Council (WECC), and CAISO;
- Integrate planned generation resources in order for those facilities to become fully deliverable (footnote omitted);
- Meet the requirements of existing Interconnection Agreements (IAs) that require the Proposed Project to achieve FCDS for generation facilities;
- Meet Proposed Project needs while minimizing environmental impacts; and
- Design and construct the Proposed Project in conformance with SCE's approved engineering, design, and construction standards for substation, transmission, subtransmission, and distribution system projects.

<u>Modifications to several of the foregoing objectives are required to either provide</u> additional clarity or to update the information as a result of the passage of time since the <u>Application was filed</u>. Each of the objectives requiring modification is addressed below.

<u>Project Objective</u>: Meet the planned in-service date of June 2020 in an effort to support the requirements as outlined and required by the California Renewables Portfolio Standard (RPS) for SCE to serve at least 33 percent of its retail load with renewable energy by 2020.

The California RPS requires investor-owned utilities, electric service providers, and community choice aggregators to procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt-hours of those products sold to their retail end-use customers achieve a designated percentage for a given year.<sup>9</sup> The RPS was established in 2002 under Senate Bill (SB) 1078 with the initial requirement that 20% of electricity retail sales be served by renewable resources by 2017. At the time the Proposed Project was approved by CAISO, the RPS required investor owned utilities, such as SCE, to increase procurement to 33% by 2020. Currently, as approved through subsequent Senate Bills, the RPS has since been increased to 60% by 2030. To reflect delays in licensing and permitting and an increase in the RPS, the objective is modified as follows:

Meet the planned in-service date of June 202021 in an effort to meet support the requirements as outlined and required by the California Renewables Portfolio Standard (RPS) including 33% by 2020 and the increased requirement of 60% by 2030 for SCE to serve at least 33 percent of its retail load with renewable energy by 2020.

<u>Project Objective</u>: Maintain system reliability within the Los Angeles Basin, which is defined as the Electrical Needs Area.

<sup>&</sup>lt;u>Additional information regarding the RPS can be found on the CPUC's website:</u> <u>http://www.cpuc.ca.gov/RPS\_Homepage.</u>

<u>The Application defined the Electrical Needs Area (ENA) to include just the Los Angeles</u> <u>Basin. However, the Proposed Project benefits not only SCE's service territory, but the entire</u> CAISO grid as is depicted in SCE's PEA at Figure 1-2.<sup>10</sup> This objective is amended as follows:

Maintain system reliability within the Los Angeles Basin <u>as well as the entire CAISO</u> <u>grid</u>, which is defined as the Electrical Needs Area (ENA).

<u>Project Objective</u>: Increase power flow through the existing Eldorado-Lugo, Eldorado-Mohave, and Lugo-Mohave 500 kV Transmission Lines for the purpose of increasing the amount of power delivered from California's Ivanpah Valley, Nevada, and Arizona to the ENA through the SCE system in an effort to meet the requirements associated with the California RPS.

Including Ivanpah Valley in this project objective did not adequately describe the various locations within California that would benefit from the increase in the amount of power capable of being delivered. As described within this Amended Application, projects that would benefit encompass several CREZs, some of which are located outside of the Ivanpah Valley. Since the use of "Ivanpah Valley" was limiting, it was removed. The revision to "California" is meant to describe how, in general, there would be an increase in the amount of power delivered from various location within California. This objective is amended as follows:

Increase power flow through the existing Eldorado-Lugo, Eldorado-Mohave, and Lugo-Mohave 500 kV Transmission Lines for the purpose of increasing the amount of power delivered from California's Ivanpah Valley, Nevada, and Arizona to the ENA through the SCE system in an effort to meet the requirements associated with the California RPS

<u>Project Objective</u>: Reduce SCE's power flow into the LADWP transmission system for the purpose of mitigating power flow overloads under normal and abnormal system conditions.

<u>The integration of additional renewable or other resources from the Mountain Pass and El</u> <u>Dorado CREZ Boundaries contributes to an increase in the amount of current flow into the</u> <u>neighboring Los Angeles Department of Water and Power (LADWP) transmission system.</u>

<sup>10</sup> http://www.cpuc.ca.gov/environment/info/aspen/elm/pea/vol1\_ch1-ch3.pdf\_

More specifically, SCE's Lugo-Mohave and Eldorado-Lugo 500 kV transmission lines are in a parallel configuration with LADWP's Adelanto-Marketplace 500 kV transmission line; McCullough-Victorville No.1 and No. 2 500 kV transmission lines; and Mead-Victorville 287 kV transmission line. Because of this parallel configuration, generation resources located within the EOP Area contribute to the increase of current flow into LADWP's system. This results in increased loading of LADWP-owned facilities under normal and abnormal system conditions.<sup>11</sup> Increasing the series compensation on the Eldorado-Lugo and Lugo-Mohave 500 kV transmission lines would have the effect of reducing the current flow into LADWP's system and redirecting that flow back into SCE's system.

This objective in the Application has changed from the time SCE filed the Application because a separate project (the Lugo-Victorville 500 kV Line Upgrade Project) has since commenced construction and will mitigate the overloads under normal conditions. However, because the Proposed Project is still needed to reduce power flow into the LADWP system for the reasons described above under abnormal conditions, SCE requests this objective be revised as stated below in order to remove the reference to normal condition overloads:

Reduce SCE's power flow into the LADWP transmission system for the purpose of mitigating power flow overloads under normal and abnormal system conditions.

#### IV.

# PROJECT COST

#### A. Eligibility for 399.2.5 Recovery

Similar to previous Commission decisions, specifically, D.07-03-012, D.07-03-045, and D.09-12-044, SCE requests that the Commission explicitly establish that, pursuant to Pub. Util.

<sup>11 &</sup>lt;u>"Abnormal conditions" refers to system conditions whereby one or more electrical system</u> components (e.g., generator, substation transformer, line, or other major component) is out of service or not operating as designed due to planned or unplanned outages.

Code § 399.2.5, SCE can recover through CPUC-jurisdictional rates all costs associated with the ELM Project prudently incurred by SCE that the FERC does not allow SCE to recover in its general transmission rates.<sup>12</sup>

# B. <u>Project Cost Background</u>

In compliance with Public Utilities Code § 1005.5(a)<sup>13</sup>, SCE developed estimated costs for the ELM Project. For purposes of determining a maximum construction cost<sup>14</sup>, SCE estimated the costs for the Proposed Project's direct costs and contingency ("Construction Costs"). The following describes the estimated Construction Costs for the ELM Project broken down by cost type.

All costs are provided in 2019 constant dollars, unless otherwise noted. As shown in Appendix "J", the total estimated maximum Construction Costs for the Proposed Project are \$250<sup>15</sup> million, in 2019 constant dollars. Consistent with SCE's request in A.05-04-018 (DPV2), and the resulting Commission decision (D.07-01-040), SCE proposes the use of both deflationary factors (to convert future year expenditures into 2019 constant dollars) and inflationary factors (to convert incurred costs in the prior years to 2019 constant dollars) to convert actual incurred costs to date, as well as future spend, to their equivalent value in 2019 constant dollars. The purpose of using inflation and deflation factors is to properly compare recorded costs against the

<sup>12</sup> Specifically, SCE's Transmission Revenue Requirement (TRR) and CAISO's TAC.

<sup>&</sup>lt;sup>13</sup> See Cal. Pub. Util. Code §1005.5(a) ("Whenever the commission issues to an electrical...corporation a certificate authorizing the new construction of any addition to or extension of the corporation's plant estimated to cost greater than fifty million dollars (\$50,000,000), the commission shall specify in the certificate a maximum cost determined to be reasonable and prudent for the facility.").

<sup>&</sup>lt;sup>14</sup> See Cal. Pub. Util. Code §1005.5 (a) ("The Commission shall determine the maximum cost using an estimate of the anticipated construction cost, economic inflation, and any known engineering difficulties associated with the project.").

<sup>15</sup> The cost estimate has increased approximately \$25 million from the estimate in the Application (see Application at Section II, p. 5) and is driven primarily by the following reasons: inflationary adjustment from 2018 to 2019 constant dollars, addition of the LADWP McCullough circuit breaker replacements, allowance for the additional requirements of a CPCN vs PTC proceeding, increase in anticipated environmental restoration costs, and refinements to project scope.

estimated maximum Construction Costs presented here in constant dollars. SCE believes the inflation and deflation factors should be calculated using an index such as the Handy-Whitman Index of Public Utility Construction Costs and the Q1 2018 HIS Power Planner in considering other factors that influence the cost of the project.

# C. Estimated Direct Costs

Estimated direct costs are based on applying unit costs to the scopes of work developed for the Proposed Project for different project components including siting, environmental surveys, licensing, preliminary and final engineering, construction, labor, materials, real estate, telecommunications, known risks, environmental monitoring and mitigation. The scope of work used for these estimates is based on the preliminary project engineering and project description information described in the PEA developed pursuant to the California Environmental Quality Act ("CEQA") and National Environmental Policy Act ("NEPA") described in Section II above as modified herein.

The scope of work for the primary components is discussed in detail in the PEA. The estimated costs were developed based on the scope of work described in the PEA and SCE's experience in estimating and constructing similar recent projects. SCE's estimated direct costs include labor, materials, equipment, and real estate. Labor costs include construction personnel and various project support functions. Construction personnel are comprised of the many crews required to safely and effectively construct the ELM Project components. Project support personnel represent resources required to design, plan and support construction activities, including but not limited to engineering, project management, cost engineering, environmental monitoring, and permitting. Material and equipment costs include but are not limited to estimates for series capacitors, tubular steel poles (TSP), steel, concrete, insulators, and optical ground wire (OPGW). Estimated real estate costs include the fee acquisition of the Series Capacitor property, as well as all costs related to upgrades of existing easement and right-of-way grants associated with approximately 235 miles of 500 kV transmission line and OPGW along private

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and public lands. Estimates of the expected direct costs by the primary components are listed in Appendix "J".

# D. <u>SCE's Contingency Estimate</u>

Cost estimates for a project of this magnitude are subject to multiple uncertainties, especially where, as here with the ELM Project, the estimates are based on preliminary scopes of work. As such, it is reasonable and prudent to assume a level of contingency to help mitigate the risks and uncertainties given this early stage of project development. "Contingency" is defined by the Association for the Advancement of Cost Engineering ("AACE<sup>16</sup>") as "specific provision for unforeseeable elements of cost within the defined project scope." In addition to AACE's standards, SCE's contingency standards are based on the professional judgment and experience of SCE's engineering and construction professionals. Based on SCE's experience, the ELM contingency is calculated as 15% on SCE remaining direct cost estimates, 10% for contracted remaining direct cost, and 0% for ordered direct material cost.

SCE's contingency attempts to account for uncertainties related to the following:

- <u>Unforeseeable elements of cost within the defined project scope</u>
- <u>Material quantity variances within the defined scope</u>
- <u>Minor material cost uncertainties</u>
- Labor hour variances within the defined scope
- Minor labor cost uncertainties
- <u>Minor fluctuations in currency exchange rates</u>
- <u>Reasonable outage scheduling risk</u>
- <u>Reasonable impacts from environmental restrictions (e.g., bird nesting)</u>

Contingency estimates cannot reasonably provide for the following:

<sup>&</sup>lt;sup>16</sup> Formerly known as the American Association of Cost Engineers ("AACE"); see AACE's Project and <u>Cost Engineers' Handbook.</u>

- <u>Major project scope changes</u>
- <u>Major schedule changes</u>
- <u>Major price increases for material and labor</u>
- <u>Significant regulatory approval delays</u>
- Subsurface conditions that are significantly different from presently available information
- <u>Unforeseeable environmental conditions and/or mitigation requirements, including,</u> for example, significant bird nesting related delays
- <u>Delays related to real property right acquisition</u>
- Intervenor and/or property owner legal challenges leading to significant project delay
- <u>Unavailability of skilled labor due to nationwide and worldwide demand, and/or</u> <u>strikes</u>
- <u>Unavailability of materials and/or equipment due to nationwide and worldwide</u> <u>demand, late delivery or faulty materials</u>
- <u>Contractor non-performance</u>
- Force majeure events, property or casualty losses

# E. <u>Cost Summary</u>

The Construction Costs associated with the Proposed Project's scope of work are broken down in the project cost table, Appendix "J". The left side of the table lists the scope elements grouped by the following categories: licensing, substation and series capacitors, transmission lines rated 200 kV or greater, distribution line work, telecommunication, real estate, and environmental work. The estimated direct costs are provided next to each element. The estimated contingency costs are then added to the total direct costs at the bottom of the project cost table. As noted in Appendix "J", the direct cost estimates are represented in 2019 constant dollars. Including contingency, the total ELM Construction Costs are estimated to be \$250 million in 2019 constant dollars.

<u>Consistent with recent CPCNs, corporate overheads and financing costs during the</u> project development and execution phases and, once in-service, operation and maintenance (O&M) costs should not be included in a CPCN's maximum cost.

There are two methods by which SCE can recover financing costs: (1) Allowance for Funds Used During Construction ("AFUDC"), and (2) Construction Work in Progress ("CWIP") in rate base. FERC has authorized CWIP, which is applicable to the qualified elements of scope contained in SCE's Petition for Declaratory Order<sup>17</sup>.

# F. <u>Public Utilities Code §1005.5 And Adjustment Of The Maximum Reasonable And</u> Prudent Cost Estimate

In D.07-01-040, the Commission recognized that the FERC will ultimately decide how much of the costs the utility may reflect in its transmission rates<sup>18</sup>. However, SCE recognizes that the Commission believes it is obligated by Public Utilities Code Section 1005.5(a) to specify "a maximum amount determined to be reasonable and prudent for the facility."<sup>19</sup> In past proceedings, this "maximum reasonable amount" has been incorrectly called a "cost cap," even though the requirement under Section 1005.5 that the Commission consider the "maximum reasonable costs" of a project does not serve as any sort of "cap" or "restraint." Rather, the clear language of the statute demonstrates that the purpose of assessing a "maximum" finding of cost is to determine whether a project with such possible maximum cost provides sufficient benefits

<sup>&</sup>lt;sup>17</sup> See FERC Order on SCE's Petition for Declaratory Order (FERC Docket No. EL17-63-000); see also Southern California Edison Co., 161 FERC Section 61,107 (2017).

<sup>18</sup> See D.07-01-040 (DPV2) at p. 45 ("While FERC will ultimately decide how much of the costs for this project SCE may recoup in transmission rates, we have jurisdiction pursuant to Pub. Util. Code § 1005.5(a) and the responsibility to specify in the CPCN a "maximum cost determined to be reasonable and prudent for the DPV2 project.").

<sup>&</sup>lt;sup>19</sup> <u>See Cal. Pub. Util. Code § 1005.5(a).</u>

as to meet the burden of showing that the project is in the public interest, need, and convenience.<sup>20</sup>

The Commission has, in fact, recognized that the costs submitted in a CPCN application are based on preliminary design estimates, and that after the CPCN is granted, the cost estimates may be adjusted based on the scope selected by the Commission, the final engineering design, final environmental mitigation requirements, and many other factors. As such, in several past transmission licensing matters, the Commission has reduced the level of contingency lowering the maximum estimate and invited SCE to file an advice letter to adjust the cost upon completion of final engineering. It would be more accurate and efficient for the Commission to simply make its initial cost finding based on SCE's maximum cost estimate.

<u>The only reason to adjust the Commission's finding of "maximum prudent costs" is to</u> <u>confirm that costs have increased and to then affirm that the Commission still finds that the</u> <u>project is in the public's convenience and necessity despite the higher associated cost:</u>

> After a certificate has been issued, the corporation may apply to the commission for an increase in the maximum cost specific in the certificate. The commission may authorize an increase in the specified maximum cost if it finds that the cost has in fact increased and that the present or future public convenience and necessity require construction of the project at the increased cost, otherwise it shall deny the application.<sup>21</sup>

<u>Thus, if the Commission arbitrarily sets a maximum cost finding too low (such as</u> reducing the cost for compliance with the Commission's own environmental mitigation

<sup>&</sup>lt;sup>20</sup> See Cal. Pub. Util. Code § 1005.5(a) (in specifying the maximum cost at which the project is within the public's convenience and necessity, the Commission is not setting a limit for actual spending or cost recovery, as to do such would be outside the CPUC's authority and jurisdiction).

<sup>21</sup> See Cal. Pub. Util. Code § 1005.5(a).

measures, reducing costs for project management, or reducing costs for contingencies that are likely to occur), this does not provide SCE with the option of not complying with the environmental mitigation requirements, not managing the project prudently, or not paying the costs when a contingency occurs. An insufficiently low specification of maximum costs at which the Commission finds a project within the public interest, will inevitably require a future true up to confirm that the Commission still finds the project itself is in the public interest, despite the increased estimate of maximum cost.

Public Utilities Code Section 1005.5(b) specifically allows the utility applicant to seek to increase the maximum cost estimate after the decision granting the CPCN has been issued, if the utility determines that the cost, in fact, has increased.<sup>22</sup> Any future adjustments would reflect such items as:

- 1. <u>Adjustments in project costs because of any unanticipated delays in</u> starting the project and/or inflation;
- 2. <u>Adjustments in project costs as a result of final design criteria;</u>
- 3. <u>Additional project costs resulting from the adopted mitigation measures</u> and mitigation monitoring program; and
- 4. Events related to equipment and raw materials, for example, the price of steel, concrete, other raw materials, and equipment that, in fact, increase the cost of the project.

For all the above reasons, SCE requests that the Commission (1) adopt a maximum reasonable and prudent cost estimate based on the specific estimated cost elements and scope presented in this filing (without reducing the maximum estimates for costs related to

As set forth in Cal. Pub. Util. Code § 1005.5 (b): "After the certificate has been issued, the corporation may apply to the commission for an increase in the maximum cost specified in the certificate. The Commission may authorize an increase in the specified maximum cost, if it finds and determines that the cost has in fact increased and that the present or future public convenience and necessity require construction of the project at the increased cost; otherwise, it shall deny the application." (Cal. Pub. Util. Code § 1005.5 (a).)

contingencies, environmental, etc.) and (2) authorize SCE to seek any adjustments to the estimate through an appropriate filing if the cost increases in the future.

#### V.

# PROCEEDING CATEGORY, NEED FOR HEARINGS, AND SCHEDULE

In compliance with Rule 2.1(c) of the Commission's Rules of Practice and Procedure (California Code of Regulations Title 20), SCE is required to state in this Amended Application "the proposed category for the proceeding, the need for hearing, the issues to be considered, and a proposed schedule." SCE proposes to categorize this Amended Application as a ratesetting proceeding. SCE anticipates that hearings will be necessary. This proceeding involves the Commission's: (i) environmental review of the Proposed Project in compliance with CEQA and the Commission's G.O. 131-D; and (ii) issuance of a CPCN authorizing SCE to construct the Proposed Project. SCE suggests the following proposed schedule for this Amended Application:

EVENT	DATE
Amended Application Filed	<u>4/19/2019</u>
Amended Application deemed complete	<u>5/20/2019</u>
Last day for Protests	<u>5/20/2019</u>
Replies to Protests	<u>5/30/2019</u>
Draft MND Circulated	<u>6/3/2019</u>
Prehearing Conference	<u>6/14/2019</u>
Comments on Draft MND	<u>7/3/2019</u>
Final MND Issued	<u>7/19/2019</u>
Opening Testimony Due (Concurrent)	<u>8/1/2019</u>
Rebuttal Testimony Due (Concurrent)	<u>8/20/2019</u>
Evidentiary Hearings	<u>9/3/2019</u>
Opening Briefs Due (Concurrent)	<u>10/1/2019</u>
Reply Briefs Due (Concurrent)	<u>10/15/2019</u>
Proposed Decision Re: CPCN	<u>11/15/2019</u>
Final Decision Issued	<u>12/19/2019</u>

# VI.

# **DEPOSIT FOR COSTS**

Pursuant to Rule 2.5 of the Commission's Rules of Practice and Procedure, SCE sent the filing fee of \$75.00 to the Commission's Docket Office on April 19, 2019.

#### VII.

# LOCATION OF ITEMS REQUIRED BY PUBLIC UTILITIES CODE SECTION 1003, COMMISSION RULES, AND GENERAL ORDER 131-D

The California Public Utilities Code, the Commission's Rules or Practice and Procedure, and the Commission's General Orders require various items of information to be submitted with a CPCN application. The table below lists the items, the authority which dictates the submittal, and references where the information is included in SCE's filing. SCE submitted some of the required items in its PTC Application and PEA filed on May 2, 2018.

CPCN APPLICATION FILING REQUIREMENTS					
<u>Requirement</u>	<u>Authority</u>	<u>Appendix</u>	<u>PEA</u>		
<u>A detailed description of the</u> proposed project	<u>G.O. 131-D, IX.A.1.a; Rule 3.1(a);</u> <u>Public Utilities Code 1003(a)</u>		<u>3.0</u>		
<u>A project map</u>	<u>G.O. 131-D, IX.A.1.b; Rule 3.1(c)</u>		Figure 3.1		
A purpose and need statement	<u>G.O. 131-D, IX.A.1.c; Rule 3.1(e)</u>		<u>1.0</u>		
Project Plan         1)       Project Implementation Plan         2)       Project Construction Management and         3)       Cost Control Plan         4)       A project schedule showing the program of right of way acquisition and construction	Public Utilities Code 1003(b); Public Utilities Code 1003(e); G.O. 131-D, IX.A.1.f	<u>Appendix C</u>			

CPCN APPLICATION FILING REQUIREMENTS					
<u>Requirement</u>	<u>Authority</u>	<u>Appendix</u>	<u>PEA</u>		
<u>A detailed statement of the</u> estimated cost	<u>G.O. 131-D, IX.A.1.d; Rule 3.1(f);</u> Public Utilities Code 1003(c)	Appendix J			
Route selection including comparison with alternative routes	<u>G.O. 131-D, IX.A.1.e</u>		<u>2.0</u>		
Governmental Agency Consultations	<u>G.O. 131-D, IX.A.1.g</u>		<u>Appendix C</u>		
PEA	<u>G.O. 131-D, IX.A.1.h</u>		<u>Submitted</u> <u>with</u> <u>Application</u>		
EMF Field Study	<u>G.O. 131-D, Section X.A</u>	<u>Appendix F</u> (amended portion only)	Full Field Management Plan submitted with original Application		
Notice of Application	<u>G.O. 131-D, XI.A</u>	Appendix D			
Articles of Incorporation (Rule 2.3)	<u>CPUC Information and Criteria</u> <u>List Appendix B, 2.2; Rule 2.2,</u> <u>Public Utilities Code 1004</u>	Appendix G			
Financial Statement (Rule 2.3); Statements and/or exhibits showing financial ability of applicant to render service; Annual Report and/or Proxy Statement	<u>CPUC Information and Criteria</u> List Appendix B, 2.3; Rule 3.1(g) and (1); Rule 2.3	<u>Appendix A</u>			
Names/addresses of all utilities, corporations, persons, or entities with which the proposed construction is likely to compete, and names of cities and counties within which service will be rendered	<u>Rule 3.1(b)</u>	<u>Appendix H</u>			
List identifying the permits required	<u>Rule 3.1(d)</u>	<u>Appendix K</u>			
Annual revenue requirement	Rule 3.1(h); Public Utilities Code 1003(d)	<u>Appendix I</u>			

# VIII.

#### **CONCLUSION**

Upon completion of its review of this Amended Application, SCE requests that the Commission issue and certify an appropriate environmental document and issue a PTC CPCN authorizing SCE to construct the Proposed Project set forth in this Amended Application and the PEA within the timelines set forth in Section V of this Amended Application.

Respectfully submitted,

BETH A. GAYLORD TAMMY JONES

/s/ Tammy Jones

By: Tammy Jones

Attorneys for SOUTHERN CALIFORNIA EDISON COMPANY

> 2244 Walnut Grove Avenue Post Office Box 800 Rosemead, California 91770 Telephone: (626) 302-6634 Facsimile: (626) 302-5690 E-mail: Tammy.jones @sce.com

April 19, 2019

# **VERIFICATION**

I am an officer of the applicant corporation herein, and am authorized to make this

verification on its behalf. I am informed and believe that the matters stated in the foregoing

document are true.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 19th day of April 2019, at Rosemead, California.

/s/ Erik Takayesu Erik Takayesu Vice President, Transmission, Substations and Operations SOUTHERN CALIFORNIA EDISON COMPANY 2 Innovation Way Pomona, California 92821 Appendix A

Balance Sheet and Statement of Income

#### SOUTHERN CALIFORNIA EDISON COMPANY

(h) A balance sheet as of the latest available date, together with an income statement covering the period from close of last year for which an annual report has been filed with the Commission to the date of the balance sheet attached to the application.

#### STATEMENT OF INCOME TWELEVE MONTHS ENDED **DECEMBER 31, 2018**

(In millions)

OPERATING REVENUE	\$ 12,611
OPERATING EXPENSES:	
Purchase power and fuel	5,406
Other operation and maintenance	2,702
Wildfire-related claims, net if insurance recoveries	2,669
Depreciation, decommissioning and amortization	1,867
Property and other taxes	392
Impairment and other	(12)
Other operating income	(7)
Total operating expenses	13,017
OPERATING (LOSS)	(406)
Interest expense	(673)
Other income and (expense)	194
(LOSS) BEFORE INCOME TAX	(885)
INCOME TAX	(696)
NET (LOSS)	(189)
Less: Preferred and preference stock dividend requirements	121
NET (LOSS) AVAILABLE FOR COMMON STOCK	\$ (310)

#### SOUTHERN CALIFORNIA EDISON COMPANY

#### BALANCE SHEET DECEMBER 31, 2018 ASSETS (in millions)

UTILITY PLANT:	
Utility plant, at original cost	\$ 46,822
Less- accumulated provision for depreciation and decommissioning	9,566
	37,256
Construction work in progress	3,883
Nuclear fuel, at amortized cost	 130
	 41,269
OTHER PROPERTY AND INVESTMENTS:	75
Nonutility property - less accumulated depreciation of \$77	75
Nuclear decommissioning trusts Other investments	4,120
Other investments	 45 4,240
	 4,240
CURRENT ASSETS:	
Cash and equivalents	21
Receivables, less allowances of \$51 for uncollectible accounts	711
Accrued unbilled revenue	482
Inventory	282
Income tax receivables	312
Prepaid expenses	144
Derivative assets	171
Regulatory assets	1,133
Other current assets	 69
	 3,325
DEFERRED CHARGES:	
Regulatory assets	5,380
Long-term insurance receivable due from affiliate	1,000
Other long-term assets	 1,360
	 7,740
	\$ 56,574

#### SOUTHERN CALIFORNIA EDISON COMPANY

#### BALANCE SHEET DECEMBER 31, 2018 CAPITALIZATION AND LIABILITIES (in millions)

CAPITALIZATION:	
Common stock	\$ 2,168
Additional paid-in capital	680
Accumulated other comprehensive loss	(23)
Retained earnings	8,715
Common shareholder's equity	11,540
Preferred and preference stock	2,245
Long-term debt	12,892
Total capitalization	 26,677
CURRENT LIABILITIES:	
Short-term debt	720
Current portion of long-term debt	79
Accounts payable	1,519
Accrued taxes	22
Customer deposits	299
Regulatory liabilities	1,532
Other current liabilities	 975
	 5,146
DEFERRED CREDITS:	
Deferred income taxes and credits	5,898
Pensions and benefits	433
Asset retirement obligations	3,031
Regulatory liabilities	8,329
Wildfire-related claims	4,669
Other deferred credits and other long-term liabilities	 2,391
	 24,751
	\$ 56,574

Appendix B

Incorporated Cities and Counties



# **Incorporated Cities and Counties Served by SCE**

COUNTIES

Fresno Imperial Inyo

Kern Kings Los Angeles Madera Mono Orange

Riverside San Bernardino Santa Barbara Tuolumne Tulare Ventura

Adelanto Agoura Hills Alhambra Aliso Viejo Apple Valley Arcadia Artesia Avalon Baldwin Park Barstow Beaumont Bell **Bell Gardens** Bellflower **Beverly Hills** Bishop Blythe Bradbury Brea Buena Park Calabasas California City Calimesa Camarillo Canyon Lake Carpinteria Carson Cathedral City Cerritos Chino Chino Hills Claremont

Commerce Compton Corona Costa Mesa Covina Cudahy Culver City Cypress Delano Desert Hot Springs Diamond Bar Downey Duarte Eastvale El Monte El Segundo Exeter Farmersville Fillmore Fontana Fountain Valley Fullerton Garden Grove Gardena Glendora Goleta Grand Terrace Hanford Hawaiian Gardens Hawthorne Hemet Hermosa Beach

Hesperia Hidden Hills Highland Huntington Beach Huntington Park Indian Wells Industry Inglewood Irvine Irwindale Jurupa Valley La Canada Flintridge La Habra La Habra Heights La Mirada La Palma La Puente La Verne Laguna Beach Laguna Hills Laguna Niguel Laguna Woods Lake Elsinore Lake Forest Lakewood Lancaster I awndale Lindsay Loma Linda I omita

CITIES Long Beach Los Alamitos Lynwood Malibu Mammoth Lakes Manhattan Beach Maywood McFarland Menifee Mission Viejo Monrovia Montclair Montebello Monterey Park Moorpark Moreno Valley Murrieta Newport Beach Norco Norwalk Ojai Ontario Orange Oxnard Palm Desert Palm Springs Palmdale Palos Verdes Estates Paramount Perris Pico Rivera

Placentia Pomona Port Hueneme Porterville Rancho Cucamonga Rancho Mirage Rancho Palos Verdes Rancho Santa Margarita Redlands Redondo Beach Rialto Ridgecrest **Rolling Hills Rolling Hills** Estates Rosemead San Bernardino San **Buenaventura** San Dimas San Fernando San Gabriel San Jacinto San Marino Santa Ana Santa Barbara Santa Clarita Santa Fe Springs Santa Monica Santa Paula

Seal Beach Sierra Madre Signal Hill Simi Valley South El Monte South Gate South Pasadena Stanton Tehachapi Temecula Temple City Thousand Oaks Torrance Tulare Tustin Twentynine Palms Upland Victorville Villa Park Visalia Walnut West Covina West Hollywood Westlake Village Westminster Whittier Wildomar Woodlake (Three Rivers) Yorba Linda Yucaipa Yucca Valley

Last Updated: 8/24/2018

# Appendix C PROJECT PLAN PROJECT IMPLEMENTATION PLAN) (PROJECT CONSTRUCTION MANAGEMENT) (COST CONTROL PLAN) (PROJECT SCHEDULE) ELDORADO-LUGO-MOHAVE SERIES CAPACITOR PROJECT

# ELDORADO-LUGO-MOHAVE SERIES CAPACITOR PROJECT PROJECT PLAN

# **1.0 INTRODUCTION**

This document is a part of Southern California Edison's Eldorado-Lugo-Mohave Series Capacitor Project ("ELMSCP") Application for a Certificate of Public Convenience and Necessity ("CPCN") to the California Public Utilities Commission ("CPUC"). This document either includes materials required by California Public Utilities ("PU") Code Section 1003 or indicates by references to where they can be found in the ELMSCP CPCN Application, Proponent's Environmental Assessment ("PEA"), or elsewhere.

# 2.0 PROJECT SCOPE

The scope of the ELMSCP, including the preliminary engineering and design information required by PU Code Section 1003 (a), may be found in Chapter 3.0 of the PEA.

# 3.0 OBJECTIVES AND GOALS

The objectives of the ELMSCP may be found in Section 3 of the Application and Section 2.2 of the PEA. During the execution (final engineering, procurement, and construction) phase, SCE's goals include:

- Completing engineering, procurement, and construction activities by the scheduled operating date
- Ensuring sufficient resources are planned and available to perform work
- Managing project budget and providing cost control and oversight
- Complying with applicable design, construction, and safety standards

# 4.0 PROJECT IMPLEMENTATION PLAN

# 4.1 Introduction

The ELMSCP will be managed on a Project Management matrix basis. Given the large project scope, cost, long material lead time, and the extended construction period, procurement of major long-lead time materials must be authorized to begin prior to regulatory approval. Extensive support will be required at the start of final engineering and will continue through the end of the project. Construction cannot begin until after regulatory approval. Any required permits identified in the regulatory approval process, must also be obtained before construction can begin in the affected areas.

# 4.2 Project Management Team

The Project Manager has the overall responsibility and commensurate authority for successful completion of the project. Responsibilities include: planning, obtaining regulatory approvals, cost, scheduling, execution (final engineering, procurement, and construction), and the overall quality of the project. Project work will be conducted using a matrix based Project Management model. All personnel assigned to the project functionally report to the Project Manager.

During the life of the project, the Project Management Team ("PMT") will consist of a number of specialized teams and support personnel with special areas of expertise. Because of the changing nature of project needs as it progresses through the development, regulatory approval, and Appendix C, Page - 1

# ELDORADO-LUGO-MOHAVE SERIES CAPACITOR PROJECT PROJECT PLAN

construction phases, the PMT will also change to meet the project needs. The PMT is responsible for the successful implementation of the ELMSCP. It is responsible for tracking costs, scope changes, schedules, and construction performance.

The PMT will have regular meetings to discuss project status, review performance, and identify any special needs or significant concerns.

# 4.3 Project Construction Management Plan

The complexities of the ELMSCP may necessitate the use of alternative construction management approaches. The construction management option to be selected will be based on SCE's need to optimize its use of limited "in-house" resources and expertise in the most effective manner. The major construction management approaches under consideration are:

- SCE performs engineering, design, and manages construction using SCE and contractor labor; or,
- SCE develops Engineering, Procurement, and Construction ("EPC") specifications which are the basis for selecting and managing any contractors needed to complete engineering, design, and/or construction activities.

SCE construction management personnel and the PMT will review SCE and contractor costs and progress on a regular basis. Table A-1, Project Schedule, identifies the preliminary design, construction, completion, and operational dates for each of the major project components.

# 5.0 COST ESTIMATE

The cost estimate required by PU Code Section 1003 (c) may be found in Section 4 of the CPCN Application.

# 6.0 COST CONTROL PLAN

The ELMSCP will have a project cost control plan. Depending upon which resource(s) is(are) utilized to perform final engineering, procurement, and construction activities on this project, a schedule of values consistent with the Work Breakdown Structure ("WBS") will serve as the basis for progress payments made to the contractor, or the measure of performance for SCE construction crews. If utilized, the contractor shall submit for SCE's review and approval its payment request, together with all required supporting documentation, for all work performed in the subject period. The contract price may only be changed by a Field Change Order ("FCO") or by a Change Request ("CR") approved by the Project Manager. The value of any work covered by a FCO or a CR will be determined by one of the following methods:

Where the work involved is covered by unit prices contained in the Contract Documents - apply the unit prices to the quantities of the items.

By a mutually agreed lump sum itemized and supported by substantiating data.

Actual cost of the work plus a contractor's fee.



# Table A-1Eldorado - Lugo - Mohave 500kV Series Capacitors Project Schedule

An EDISON INTERNATIONAL® Company

Description	Duration			Year
	(Months)	1	2	3
Filing/CPUC Approval				
Amended Application Filed	0	Amended Application Filed		
Draft MND	0	\Rightarrow Draft MND		
Final MND	0	H Final MND		
Proposed Decision Re:CPCN	9		posed Decision Re:CPCN	
Final Decision Issued	0	-•••	Final Decision Issued	
BLM Record of Decision/ROW Grant	0		BLM Record of Decision/ROW Grant	
NTP Issuance	0		L ► NTP Issuance	
Final Engineering				
Telecom Engineering	8	Telecc	om Engineering	
Substation Engineering	10		☐ Substation Engineering	
Transmission Engineering	6	Transmission E	ngineering	
Land Acquisitions				
Substation ROW	5	Subs	tation ROW	
Telecom ROW	4		ROW	
Condemnation (If Required)	5		Condemnation (If Required)	
Procurement				
Long-Lead Matl Procurement (w/Advance Approval)	10		<u> _ Long</u> -Lead Matl Procurement (w/Advance Approval)	
Construction				
Telecom Diversity Construction	11			Telecom Diversity Construction
IT/Telecom Construction	11			IT/Telecom Construction
Distribution Construction	10		►	
Substation Construction	14			Substation Construction
Transmission Construciton	14			Transmission Construcito
In-Service Testing	2			L►In-Service Testir
Online Date				
Online Date	0			↔Online Date

**NOTE:** The construction duration would depend on items such as, but not limited to the following: the availability of substation, transmission line outages, environmental constraints (such as nesting birds), weather, and construction resource availability.

		4	
on			

Appendix D

Notice of CPCN Application

# NOTICE OF APPLICATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY (CPCN)

## ELDORADO-LUGO-MOHAVE SERIES CAPACITOR PROJECT

Re-Filing Date: April 19, 2019

**Proposed Project:** Southern California Edison Company (SCE) previously filed an application for a Permit To Construct on May 2, 2018, with the California Public Utilities Commission (CPUC) for construction of the Eldorado-Lugo-Mohave Series Capacitor Project (Proposed Project). The CPUC in an Assigned Commissioner's Ruling issued January 9, 2019, ordered SCE to file an amended application for a CPCN. A primary purpose of the Proposed Project is integrate renewable generation by increasing the import capability of the Eldorado-Lugo and Lugo-Mohave 500 kV transmission lines in support of the California Renewable Portfolio Standard (RPS).

The Proposed Project is needed to address a transmission constraint which limits deliverability of renewable generation into California by increasing the capability of the existing electric infrastructure. Construction will take place primarily along the Eldorado-Lugo, Eldorado-Mohave and Lugo-Mohave 500 kilo-volt (kV) Transmission Lines located in San Bernardino County, California, and Clark County, Nevada. The Proposed Project also includes nearby distribution line and telecommunications construction.

**<u>Project Description</u>**: The Proposed Project consists of the following major components (please also refer to the enclosed map below):

# **Series Capacitors**

 Construction of two new 500 kV mid-line series capacitors—the Newberry Springs Series Capacitor and Ludlow Series Capacitor on approximately 3.3- and 3.2-acre sites within the Eldorado-Lugo and Lugo-Mohave 500 kV Transmission Line rights-of-way, respectively, near SCE Pisgah Substation in unincorporated San Bernardino County, California, located approximately 35 miles east of Barstow, north of Interstate 40.

# **Transmission Lines and Towers**

Correction of 16 overhead line clearance discrepancies involving relocation, replacement, or modification
of existing transmission, subtransmission, and distribution facilities including minor grading along the
Eldorado-Lugo, Eldorado-Mohave, and Lugo-Mohave 500 kV Transmission Lines.

# Substations

- Modifications within the existing Lugo, Eldorado, McCullough and Mohave Substations within San Bernardino County, California; Clark County, Nevada; and Boulder City, Nevada, including:
  - Replace circuit breakers at McCullough Substation (work added subsequent to SCE's initial May 2, 2018 application)
  - Replacing existing series capacitors at Mohave Substation
  - Modification of existing series capacitors at Lugo and Eldorado Substations
  - Removal of two tubular steel poles (TSPs) and installation of two new TSPs at Lugo Substation
  - o Installation of new terminal equipment at Eldorado, Lugo, and Mohave Substations

# **Distribution and Telecommunications**

- Installation of distribution facilities in unincorporated San Bernardino County, California to provide station light & power to three proposed fiber optic repeater sites and to the proposed Newberry Springs Series Capacitor and Ludlow Series Capacitor sites.
- Removal of an existing overhead ground wire (OHGW), modification of existing towers to support optical ground wire (OPGW), and installation of approximately 235 miles of overhead OPGW, which includes approximately 3 miles of underground telecommunications facilities in the vicinity of the Mohave Substation.
- Installation of overhead and underground telecommunication facilities in unincorporated San Bernardino County, California including the installation of three fiber optic repeater sites within the Lugo-Mohave 500 kV Transmission Line rights-of-way.

Construction is scheduled to begin in 1st Quarter of 2020, and the Proposed Project is expected to be operational by June 2021.

<u>Electric and Magnetic Fields (EMF) Compliance</u>: The CPUC requires utilities to employ "no-cost" and "low-cost" measures to reduce public exposure to magnetic fields. In accordance with "EMF Design Guidelines" (Decisions 93-11-013 and 06-01-042.), the Proposed Project would implement a combination of the following measures:

- 1. Install mid-line series capacitors in undeveloped areas
- 2. Place substation series capacitors away from the substation property lines
- 3. Utilize taller structure heights in areas with potential overhead discrepancies
- 4. Relocate under-build distribution circuits on 115 kV structures
- 5. Increase conductor ground clearance

**Environmental Review:** SCE has prepared a Proponent's Environmental Assessment (PEA) of potential environmental impacts created by the construction and operation of the Proposed Project. The PEA concludes that with the implementation of Applicant-Proposed Measures, the majority of the potential significant environmental effects associated with the Proposed Project would be reduced to less than significant levels.

Pursuant to the California Environmental Quality Act (CEQA), the CPUC's Energy Division will conduct an independent review of the proposed project's environmental impacts. Depending on the results of its review, the Energy Division is expected to issue a Mitigated Negative Declaration that the Proposed Project will not result in any significant environmental impacts or an environmental impact report (EIR) identifying the significant environmental impacts and mitigation measures and alternatives to avoid or reduce them.

**Public Participation:** The public may participate in the environmental review by submitting comments on the Notice of Intent to Approve a Mitigated Negative Declaration, or on the Notice of Preparation of EIR and draft EIR, and by participating in any scoping meetings or public meetings that may be conducted. For information on the environmental review, contact the CPUC's Energy Division at <u>enviroteam@cpuc.ca.gov</u> or (415) 703-2126.

Persons wishing to present testimony in evidentiary hearings and/or legal briefing on all other issues, including project need and cost, and EMF compliance, require party status. Persons may obtain party status by filing a protest to the application by **May 20, 2019**, in compliance with CPUC General Order 131-D and the CPUC's Rules of Practice and Procedure Rule 2.6, or by making a motion for party status at any time in compliance with Rule 1.4 (posted at <u>www.cpuc.ca.gov</u>).

The public may communicate their views regarding the application by writing to the CPUC at 505 Van Ness Avenue, San Francisco, CA 94102, or by emailing the Public Advisor at <u>public.advisor@cpuc.ca.gov</u>. In addition, the CPUC may, at its discretion, hold a public participation hearing in order to take oral public comment.

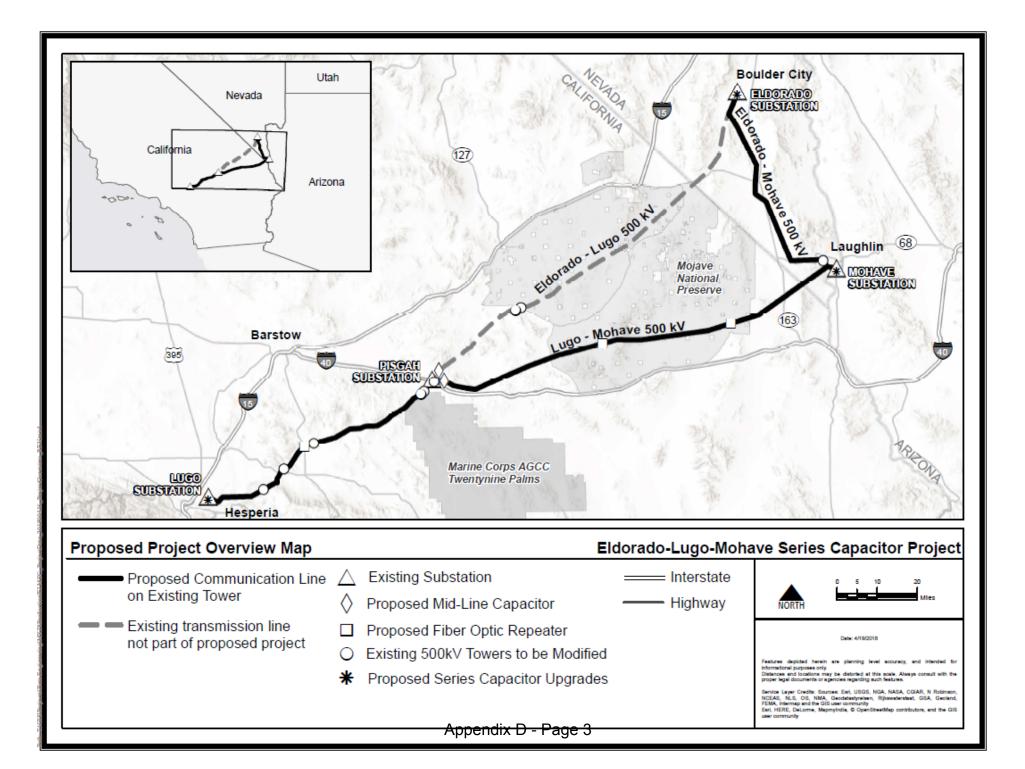
**Document Subscription Service:** The CPUC's free online subscription service sends subscribers an email notification when any document meeting their subscription criteria is published on the CPUC's website, such as documents filed in a CPUC proceeding (e.g., notices of hearings, rulings, briefs and decisions). To sign up to receive notification of documents filed in this proceeding (or other CPUC matters), visit www.cpuc.ca.gov/subscription.

<u>Contacts</u>: For assistance from the CPUC, please contact the Public Advisor in San Francisco at (415)703-2074 (<u>public.advisor@cpuc.ca.gov</u>) or toll free at (866) 849-8391.

To review a copy of SCE's application, or to request further information about the Proposed Project, please contact:

Selya J. Arce, Sr. Project Manager 2 Innovation Way Pomona, CA 91768

Phone: 909-274-3709 Email: <u>Selya.Arce@sce.com</u>



#### **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 Certificate of Public Convenience and Necessity Regarding the Eldorado-Lugo-Mohave Series Capacitor Project.

Application No. 18-05-007

#### **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 the NOTICE OF APPLICATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY (CPCN) REGARDING THE ELDORADO-LUGO-MOHAVE SERIES CAPACITOR PROJECT, on all parties identified on the attached service lists.

Service was effected by one or more means indicated below:

- Placing the copies in sealed envelopes and causing such envelopes to be delivered via USPS First Class Mail.
  - Lists: Eldorado Lugo Mohave Series Capacitor Project Agency List Eldorado Lugo Mohave Series Capacitor Project 300-Foot List Eldorado Lugo Mohave Series Capacitor Project Interested Party List

Executed this April 19, 2019, 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

### Eldorado-Lugo-Mohave Series Capacitor Project Agency Mailing List for Notice of Application

Steve Sisolak, Chair	Yolanda King	Nancy Amundsen
Clark County Commission	Clark County - County Manager	Clark County - Director of Planning
500 S. Grand Central Pkwy.	500 S. Grand Central Pkwy.	500 S. Grand Central Pkwy.
Las Vegas, NV 89155	Las Vegas, NV 89155	Las Vegas, NV 89155
J. Dapper, Chair	Rod Woodbury, Mayor	Alfonso Noyola, City Manager
Clark County Planning Commission	Boulder City	Boulder City
500 S. Grand Central Pkwy.	401 California Avenue	401 California Avenue
Las Vegas, NV 89155	Boulder City, NV 89005	Boulder City, NV 89005
Michael Mays, Planning Director	Fritz McDonald, Chair	Robert A. Lovingood, Chairman
Boulder City	Boulder City Planning Commission	Board of Supervisors
401 California Avenue	401 California Avenue	San Bernardino County
Boulder City, NV 89005	Boulder City, NV 89005	385 N. Arrowhead Avenue
		San Bernardino, CA 92415
lanice Rutherford	Supervisor Rowe	Gary McBride, CEO
Supervisor, Second District	Supervisor, Third District	San Bernardino County
San Bernardino County	San Bernardino County	385 N. Arrowhead Avenue
385 N. Arrowhead Avenue	385 N. Arrowhead Avenue	San Bernardino, CA 92415-0120
San Bernardino, CA 92415	San Bernardino, CA 92415	
Ferri Rahhal, Planning Director		Puscall Plawatt Mayor
	Jonathan Weldy, Chair	Russell Blewett, Mayor
San Bernardino County	Planning Commission	City of Hesperia
385 N. Arrowhead Avenue	San Bernardino County	9700 Seventh Avenue
San Bernardino, CA 92415	385 N. Arrowhead Avenue	Hesperia, CA 92345
	San Bernardino, CA 92415	
Nils Bentsen, City Manager	Jeff Codega, Principal Planner	Tom Murphy, Chair
City of Hesperia	City of Hesperia	Planning Commission
9700 Seventh Avenue	9700 Seventh Avenue	City of Hesperia
Hesperia, CA 92345	Hesperia, CA 92345	9700 Seventh Avenue
		Hesperia, CA 92345
Richard Corey, Executive Officer	Curt Hagman, Vice-Chairman	Dana Cole, P.G., Eng. Geologist
California Air Resources Board	Supervisor, Fourth District	401 Certification Unit CalEPA –
P.O. Box 2815	San Bernardino County	Water Board, LA Region
Sacramento, CA 95812	385 N. Arrowhead Avenue	320 W. 4th St., 2nd Floor
	San Bernardino, CA 92415	Los Angeles, CA 90013-2343
Edward Randolph, Energy Div Dir	Allison Brown, CPUC Public Advisor	Drew Bohan, Executive Director
California Public Utilities Commission	California Public Utilities Comm.	California Energy Commission
505 Van Ness Avenue	505 Van Ness Avenue	1516 Ninth Street
San Francisco, CA 94102	San Francisco, CA 94102	Sacramento, CA 95814
Malcolm Dougherty, Director	Gary Cathey, Director	John Laird, Secretary
Department of Transportation	Dept of Transportation	California Resources Agency
P.O. Box 942873	Div. of Aeronautics - MS 40	1416 Ninth St Suite 1311
Sacramento, CA 94273-0001	P. O. Box 942874	Sacramento, CA 95814
Jacramento, CA 34273-0001	Sacramento, CA 94274-0001	
Charlton H. Bonham Director	Jennifer Kent, Director	Filoon Sobock, Executive Director
Charlton H. Bonham, Director		Eileen Sobeck, Executive Director
California Dept. of Fish and Wildlife	Department of Health Services	State Water Resources Control Brd
1416 9th Street, 12th Floor	P.O. Box 997413, MS 0000	P.O. Box 100
Sacramento, CA 95814	Sacramento, CA 95899-7413	Sacramento, CA 95812-0100
Iulianne Polanco, SHPO	Victor Globa, Environmental Splst	Patty Kouyoumdjian, Exec. Officer
Calif. Office of Historic Preservation	FAA-West-Pac Region Airports Div	Water Regional Board 6
1725 23rd Street, Suite 100	15000 Aviation Blvd. – Rm 3024	15095 Amargosa Rd. Bldg 2-Suite 210
Sacramento, CA 95816-7100	Lawndale, California 90261	Victorville, CA 92394

Brad Poiriez, Executive Director	John Bulinski, District Director	Regional Director-Region 8
Mojave Desert Air Quality	California Department of	Federal Bldg – Dept. Fish & Wildlife
Management District	Transportation - District 8	2800 Cottage Way, Room W-2606
14306 Park Ave	464 W. 4th Street	Sacramento, CA 95825-1846
Victorville, CA 92392	San Bernardino, CA 92401	,
Danette Woo	Greg Miller, Deputy Dist. Manager	Gayle Marrs-Smith, Field Manager
Environmental Compliance	U.S. Bureau of Land Mgmt (CA)	U.S. Bureau of Land Mgmt
Mohave National Preserve	California Desert District	4701 North Torrey Pines Drive
2701 Barstow Rd.	22835 Calle San Juan de Los Lagos	Las Vegas, NV 89130
Barstow, CA 92311	Moreno Valley, CA 92553	
Tony Wasley	Dave Emme, Administrator	Stephanie Mullen, Executive Director
Director - Nevada Dept. of Wildlife	Nevada Div. Environmental Protection	Public Utilities Comm. of Nevada
1100 Valley Road	901 S. Stewart Street, Suite 4001	1150 E. William Street
Reno, NV 89512	Carson City, NV 89701	Carson City, NV 89701
Rudy Malfabon, P.E., Director	Anne-Marie Cuneo	Antal Szijj, Section Chief
Nevada Department of Transportation	Director of Regulatory Operations	U.S. Army Corps of Engineers –
1263 South Stewart Street	Public Utilities Comm. of Nevada	Regulatory Division
Carson City, NV 89712	1150 E. William Street	2151 Alessandro Dr. Ste. 110
	Carson City, NV 89701	Ventura, CA 93001
Bradley Crowell, Director	Dr. Terry Fulp, Regional Director	Jose L. Angel, Executive Officer
Nevada Dept of Natural Resources &	Bureau of Reclamation	Water Regional Board 7
Conservation	Lower Colorado Regional Office	73-720 Fred Waring Drive, Suite 100
901 S. Stewart St., Ste. 1003	P. O. Box 61470	Palm Desert, CA 92260
501 51 51 51 51 51 50 5		
Carson City, NV 89701	Boulder City, NV 89006	
	Boulder City, NV 89006 Eric M. Johnson, Administrator	
Carson City, NV 89701	•	
Carson City, NV 89701 Jennifer Lucchesi, Executive Director	Eric M. Johnson, Administrator	

## Eldorado-Lugo-Mohave Series Capacitor Project Interested Party List for Notice of Application

Chuck Bell, President	Lucerne Valley / Johnson Valley	Dr. Brian Paulson
Lucerne Valley Economic	Municipal Advisory Council	Town Manager - Laughlin Town
Development Association	3rd District of San Bernardino Co	101 Civic Way
P. O. Box 193	c/o County Service Area 29	Laughlin, Nevada 89029
Lucerne Valley, CA 92356	P.O. Box 459	
	Lucerne Valley, CA 92356	
Paula Deel	Regis Reverchon	Patricia Englin
Newberry Springs Chamber of	Desert Harvest I LLC &	Sunshine Valley Solar, LLC
Commerce	Desert Harvest II LLC	135 Main Street, 6th Floor
PO Box 116	505 14th Street, Suite 1150	San Francisco, CA 94105
Newberry Springs, CA 92365	Oakland, CA 94612	
James Kelly	Khoa Le	Jason M. Murray
ARES Nevada, LLC	Southern California Gas Co.	Union Pacific – Real Estate
854 Jimeno Road	1050 Overland Court	1400 Douglas St., Stop 1690
Santa Barbara, CA 93103	San Dimas, CA 91773	Omaha, Nebraska 68179-1690
Deann McKay	Jasmine C. Kleiber	Daniel Haggarty
U.S. Bureau Land Mgnt (NV)	Nevada Dept of Wildlife	PUCN - Legal
901 S. Stewart Street, Suite 5003	Habitat Division – AB307	1150 E. William Street
Carson City, NV 89701-5246	6980 Sierra Center Pkwy, Ste 120	Carson City, NV 89701-3109
	Reno, NV 89511	
Jim Porter	Lorrie L. Steely	Francis Wang,
California State Lands Commission	Mojave Communities	Arlington Solar, LLC
100 Howe Ave., Suite 100-South	Conservation Collaborative	700 Universe Blvd.
Sacramento, CA 95825	PO Box 1136	Juno Beach, FL 33408
	Lucerne Valley, CA 92356	
Robert P. Bilbray	BNSF	San Bernardino County
Laughlin Economic Devel. Corp.	Acquisition & Development	Supervisor Dawn Rowe
P.O. Box 33702	2301 Lou Menk Dr GOB-3W	385 N Arrowhead, 5 <sup>th</sup> Floor
Laughlin, NV 89028	Fort Worth, TX 76131-2830	San Bernardino, CA 92415
San Bernardino County	San Bernardino County	San Bernardino County
Supervisor Robert Lovingood	Land Use Services	Public Works Department
385 N Arrowhead, 5 <sup>th</sup> Floor	Terri Rahhal, Director LUS	Kevin Blakeslee, Director PW
San Bernardino, CA 92415	385 N Arrowhead, 1 <sup>st</sup> Floor	825 East 3rd St., Rm 100
	San Bernardino, CA 92415	San Bernardino, California
		92415-0835

ASSESSOR'S PARCEL NUMBER	MAILING ADDRESS	MAILING CITY, STATE, ZIP CODE	AGENCY NAME
0357-044-48-0000	5252 PENDLETON ST	SAN DIEGO, CA 92109	
0357-441-24-0000	1839 CALLE LA PAZ	ROWLAND HEIGHTS, CA 91748	
0357-451-02-0000	3024 ARAPAHO ST	NORCO, CA 92860	
0357-471-22-0000	6546 ESCONDIDO AVE	OAK HILLS, CA 92344	
0397-023-01-0000	22835 CALLE SAN JUAN DE LOS LAGOS, BUREAU OF LAND MGMT	MORENO VALLEY, CA 92553	Bureau of Land Management
0397-082-19-0000			
0405-401-25-0000			
0405-411-05-0000			
0432-022-16-0000			
0432-022-21-0000			
0432-022-22-0000			
0357-671-31-0000	527 WILLOW PL	LA VERNE, CA 91750	
0357-671-37-0000	13289 STUVELING ST	OAK HILLS, CA 92344	
0432-022-23-0000			
0357-671-41-0000	PO BOX 5004	VICTORVILLE, CA 92393	
0432-022-24-0000			
0397-013-03-0000	PO BOX 700	LAKE ARROWHEAD, CA 92352	
0397-013-04-0000	PO BOX 700	LAKE ARROWHEAD, CA 92352	
0397-013-23-0000	7250 ARROWHEAD LAKE RD	HESPERIA, CA 92345	
0397-013-24-0000	PO BOX 400356	HESPERIA, CA 92340	
0397-013-25-0000	217 PERUVIAN AVE STE 2	PALM BEACH, FL 33480	
0397-022-07-0000	2009 YACHT DEFENDER	NEWPORT BEACH, CA 92660	
0397-022-14-0000	PO BOX 645	CALIMESA, CA 92320	
0432-022-25-0000			
0397-023-05-0000	31151 CALLE BOLERO	SAN JUAN CAPISTRANO, CA 92675	
0397-023-06-0000	55 OAK VALLEY DR	NOVATO, CA 94947	
0397-023-07-0000	55 OAK VALLEY DR	NOVATO, CA 94947	
0397-023-08-0000	55 OAK VALLEY DR	NOVATO, CA 94947	
0397-023-15-0000	55 OAK VALLEY DR	NOVATO, CA 94947	
0397-023-16-0000	PO BOX 400785	HESPERIA, CA 92340	
0397-023-16-0000	PO BOX 400785	HESPERIA, CA 92340	
0432-022-26-0000			
0432-022-27-0000			
0397-023-19-0000	30 OSMEN OR	HESPERIA, CA 92345	
0397-023-20-0000	6261 ARROWHEAD LAKE RD	HESPERIA, CA 92345	
0397-023-21-0000	6224 ARROWHEAD LAKE RD	HESPERIA, CA 92345	
0397-023-25-0000	1550 S BLUE RIVER RD	SALEM, IN 47167	
0397-023-29-0000	55 OAK VALLEY DR	NOVATO, CA 94947	
0397-052-13-0000	9960 W CHEYENNE AVE STE 212	LAS VEGAS, NV 89129	
0397-052-14-0000	7425 E STONE CREEK LN	ANAHEIM, CA 92808	
0397-052-16-0000	PO BOX 645	CALIMESA, CA 92320	
0397-071-11-0000	10043 GOTHIC AVE	NORTH HILLS, CA 91343	
0397-082-06-0000	10043 GOTHIC AVE	NORTH HILLS, CA 91343	

21325 TONO RD 39515 167TH ST E 9960 W CHEYENNE AVE STE 212 10043 GOTHIC AVE 10043 GOTHIC AVE 1904 OAK AVE 91 HOOLU PL 582 CHELSEA WAY 4228 WHITESIDE ST 14853 DURHAM CIR 3608 ANDERSON LN 1420 REXFORD AVE 1420 REXFORD AVE 20267 KAYNE ST PO BOX 3282 32472 AZORES RD 10750 BENNETT DR 2651 CEDAR AVE 10556 BIANCA AVE 250 S GRAMERCY PL PO BOX 753

851 PEPPER ST 10300 4TH AVE PO BOX 1830 9960 W CHEYENNE AVE STE 212 8420 FAIRTON ST 10043 GOTHIC AVE 9960 W CHEYENNE AVE STE 212

9700 SEVENTH AVE 32063 PACIFICA DR 10043 GOTHIC AVE 6807 BRISA LN

APPLE VALLEY, CA 92308	
PALMDALE, CA 93591	
LAS VEGAS, NV 89129	
NORTH HILLS, CA 91343	
NORTH HILLS, CA 91343	
MANHATTAN BEACH, CA 90266	
EWA BEACH, HI 96706	
CORONA, CA 92879	
LOS ANGELES, CA 90063	
MORENO VALLEY, CA 92555	
LAS VEGAS, NV 89106	
PASADENA, CA 91107	
PASADENA, CA 91107	
CORONA, CA 92881	
MERCED, CA 95344	
DANA POINT, CA 92629	
FONTANA, CA 92337	
LONG BEACH, CA 90806	
GRANADA HILLS, CA 91344	
LOS ANGELES, CA 90004	
SAN JUAN CAPISTRANO, CA 92693	

EL SEGUNDO, CA 90245	
HESPERIA, CA 92345	
COSTA MESA, CA 92628	
LAS VEGAS, NV 89129	
PARAMOUNT, CA 90723	
NORTH HILLS, CA 91343	
LAS VEGAS, NV 89129	

HESPERIA, CA 92345	
RANCHO PALOS VERDES, CA 90275	
NORTH HILLS, CA 91343	
RANCHO MURIETA, CA 95683	

0405-391-14-0000	1560 E FLORENCE AVE	LOS ANGELES, CA 90001	
0405-391-15-0000	3809 S BIRCH ST	SANTA ANA, CA 92707	
0432-231-20-0000			
0405-391-18-0000	3192 TEMESCAL AVE	NORCO, CA 92860	
0405-391-20-0000	5996 RIMVIEW CT	RIVERSIDE, CA 92506	
0405-391-22-0000	18379 ORANGE ST	HESPERIA, CA 92345	
0432-231-21-0000			
0432-231-22-0000			
0405-391-38-0000	1560 E FLORENCE AVE	LOS ANGELES, CA 90001	
0432-231-23-0000			
0432-231-24-0000			
0405-391-44-0000	1560 E FLORENCE AVE	LOS ANGELES, CA 90001	
0405-391-45-0000	1560 E FLORENCE AVE	LOS ANGELES, CA 90001	
0433-081-02-0000			
0433-081-03-0000			
0405-391-49-0000	3809 S BIRCH ST	SANTA ANA, CA 92707	
0433-091-02-0000			
0433-091-05-0000			
0405-391-52-0000	2301 LOU MENK DR GOB-3W	FORT WORTH, TX 76131	
0405-391-53-0000	PO BOX 400214	HESPERIA, CA 92340	
0405-401-07-0000	PO BOX 2078	CRESTLINE, CA 92325	
0405-401-15-0000	PO BOX 2078	CRESTLINE, CA 92325	
0405-401-16-0000	PO BOX 2078	CRESTLINE, CA 92325	
0405-401-17-0000	PO BOX 2078	CRESTLINE, CA 92325	
0405-401-20-0000	5833 FREMONT ST	RIVERSIDE, CA 92504	
0405-401-21-0000	15309 YEW CT	FONTANA, CA 92335	
0405-401-24-0000	808 NE 113TH AVE	PORTLAND, OR 97220	
0433-091-08-0000			
0405-401-26-0000	3107 CAROLWOOD LN	TORRANCE, CA 90505	
0405-401-27-0000	5420 RUTILE ST	JURUPA VALLEY, CA 92509	
0405-401-27-0000	5420 RUTILE ST	JURUPA VALLEY, CA 92509	
0405-401-29-0000	15140 FRESH WATER WAY	VICTORVILLE, CA 92394	
0405-401-30-0000	15140 FRESH WATER WAY	VICTORVILLE, CA 92394	
0433-111-01-0000			
0405-401-36-0000	2301 LOU MENK DR GOB-3W	FORT WORTH, TX 76131	
0405-401-38-0000	3809 S BIRCH ST	SANTA ANA, CA 92707	
0405-401-39-0000	3809 S BIRCH ST	SANTA ANA, CA 92707	
0405-401-40-0000	7920 MAPLE AVE # 2	HESPERIA, CA 92344	
0405-411-04-0000	919 WALBURG ST	GREEN COVE SPRINGS, FL 32043	
0433-111-02-0000			
0405-411-06-0000	213 S REESE PL	BURBANK, CA 91506	
0405-411-07-0000	31951 VIA ARARAT DR	BONSALL, CA 92003	
0405-411-10-0000	5833 FREMONT ST	RIVERSIDE, CA 92504	
0405-411-11-0000	5833 FREMONT ST	RIVERSIDE, CA 92504	
0405-411-12-0000	1325 N BRAND BLVD APT 2	GLENDALE, CA 91202	

0405-411-13-0000	8672 BRENTFORD RD	SAN GABRIEL, CA 91775
0405-411-14-0000	26608 PRESIDENT AVE	SAN PEDRO, CA 90731
0405-411-15-0000	16000 EL CENTRO ST	HESPERIA, CA 92345
0405-411-18-0000	11911 HWY 138	HESPERIA, CA 92345
0433-111-03-0000		
0433-121-15-0000		
0435-062-02-0000		
0448-011-02-0000		
0448-011-03-0000		
0448-011-05-0000		
0448-011-06-0000		
0448-021-01-0000		
0448-021-02-0000		
0448-021-06-0000		
0448-031-01-0000		
0451-011-09-0000		
0451-011-13-0000		
0432-022-35-0000	39885 RUSTIC GLEN DR	TEMECULA, CA 92591
0432-022-37-0000	8726 CORTO RD	APPLE VALLEY, CA 92308
0432-023-01-0000	3595 INLAND EMPIRE BLVD STE 3	ONTARIO, CA 91764
0432-023-06-0000	3351 SHAWN WAY	HAYWARD, CA 94541
0432-023-07-0000	1415 N MUSTANG AVE	ORANGE, CA 92869
0432-023-08-0000	2357 LARIAT LN	WALNUT CREEK, CA 94596
0432-023-22-0000	12369 DOWNEY AVE	DOWNEY, CA 90242
0432-023-23-0000	12369 DOWNEY AVE	DOWNEY, CA 90242
0432-023-27-0000	9622 OXFORD RD	PHELAN, CA 92371
0432-023-28-0000	1770 N ARROWHEAD AVE	SAN BERNARDINO, CA 92405
0452-011-09-0000		
0453-051-01-0000		
0453-051-02-0000		
0432-023-41-0000	PO BOX 2581	YUCCA VALLEY, CA 92286
0432-023-51-0000	1815 ASTOR CT	LANCASTER, CA 93534
0432-023-56-0000	3152 HALF CIRCLE RD	NORCO, CA 92860
0432-023-57-0000	4730 E MAYCHELLE DR	ANAHEIM, CA 92807
0432-032-01-0000	233 SANSOME ST STE 928	SAN FRANCISCO, CA 94104
0453-051-03-0000		
0432-071-06-0000	3815 MINNEKAHTA DR	RAPID CITY, SD 57702
0453-151-04-0000		
0432-071-08-0000	3815 MINNEKAHTA DR	RAPID CITY, SD 57702
0453-161-03-0000		
0432-071-16-0000	24921 MOHR DR	HAYWARD, CA 94545
0432-071-17-0000	2314 N LOWELL LN	SANTA ANA, CA 92706
0432-071-18-0000	24921 MOHR DR	HAYWARD, CA 94545
0453-161-05-0000		
0432-071-21-0000	608 W GAILLARD ST	GLENDORA, CA 91740

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0432-071-22-0000	3815 MINNEKAHTA DR	RAPID CITY, SD 57702	
0432-071-24-0000	3815 MINNEKAHTA DR	RAPID CITY, SD 57702	
0432-071-29-0000	28726 ARROYO VISTA DR	HIGHLAND, CA 92346	
0432-231-10-0000	8390 MILPAS DR	APPLE VALLEY, CA 92308	
0453-381-02-0000			
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0453-381-04-0000			
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0453-381-07-0000			
0453-381-08-0000			
0453-381-09-0000			
0453-381-10-0000			
0433-041-02-0000	3815 MINNEKAHTA DR	RAPID CITY, SD 57702	
0453-381-11-0000			
0453-391-07-0000			
0453-391-08-0000			
0453-391-09-0000			
0453-391-10-0000			
0433-091-09-0000	2800 COTTAGE WAY STE E2609	SACRAMENTO, CA 95825	Bureau of Land Management
0433-091-10-0000	6407 ARNOLD WAY	BUENA PARK, CA 90620	
0433-091-11-0000	14313 TEDFORD DR	WHITTIER, CA 90604	
0433-091-12-0000	PO BOX 1221	CHINO HILLS, CA 91709	
0433-091-13-0000	15785 LORENE DR	VICTORVILLE, CA 92395	
0433-091-14-0000	5352 W WASHINGTON BLVD	LOS ANGELES, CA 90016	
0453-621-02-0000			
0453-621-03-0000			
0453-621-04-0000			
0433-121-08-0000	3024 TREESDALE DR	LAS VEGAS, NV 89134	
0433-121-09-0000	111 OVAL RD	IRVINE, CA 92604	
0433-121-10-0000	111 OVAL RD	IRVINE, CA 92604	
0433-121-11-0000	111 OVAL RD	IRVINE, CA 92604	
0433-121-12-0000	111 OVAL RD	IRVINE, CA 92604	
0433-121-14-0000	9484 IROQUOIS AVE	APPLE VALLEY, CA 92308	
0453-621-05-0000			
0453-621-06-0000			
0453-621-07-0000			
0453-621-08-0000			
0453-621-09-0000			
0435-062-03-0000	810 TINNALO RD	ARCADIA, CA 91006	
0453-621-10-0000			
0453-621-11-0000			
0453-621-12-0000			

0453-621-13-0000 0453-631-01-0000

0453-631-02-0000		
0435-062-10-0000	3441 PEDLEY AVE	NORCO, CA 92860
0435-062-13-0000	4231 N ST # 101	IRVING, TX 75038
0435-062-14-0000	PO BOX 8105	NEWPORT BEACH, CA 92658
0435-062-15-0000	175 CALVERT DR # 205	CUPERTINO, CA 95014
0453-631-11-0000		, ,
0435-062-18-0000	PO BOX 8105	NEWPORT BEACH, CA 92658
0453-631-13-0000		
0453-631-14-0000		
0453-631-15-0000		
0453-631-16-0000		
0435-062-23-0000	8566 TRINITY CIR UNIT 820D	HUNTINGTON BEACH, CA 92646
0435-062-24-0000	450 E 246TH PL	CARSON, CA 90745
0435-062-25-0000	1484 N ALTADENA DR	PASADENA, CA 91107
0453-631-17-0000		
0453-631-18-0000		
0453-641-01-0000		
0453-641-02-0000		
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0453-641-16-0000		
0453-651-06-0000		
0453-651-08-0000		
0453-661-01-0000		
0453-661-20-0000		
0435-062-49-0000	3641 N GAREY AVE	POMONA, CA 91767
0435-062-50-0000	11143 JACOB CROSSING DR	RICHMOND, TX 77406
0435-062-51-0000	1922 AUSTIN CT	CLAREMONT, CA 91711
0435-062-52-0000	4 MATTINA DR	NEWPORT COAST, CA 92657
0435-062-53-0000	PO BOX 8159	CALABASAS, CA 91372
0435-062-54-0000	1048 W 4200 S	OGDEN, UT 84405
0435-062-55-0000	432 SEMINOLE AVE	PLACENTIA, CA 92870
0435-072-03-0000	6815 N 2ND ST	PHOENIX, AZ 85012
0435-072-04-0000	6815 N 2ND ST	PHOENIX, AZ 85012
0435-072-05-0000	9506 SILENT HILLS LN	LONE TREE, CO 80124

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0435-073-01-0000
0435-073-02-0000
0435-073-04-0000
0435-073-05-0000
0435-073-08-0000
0435-073-09-0000
0435-073-13-0000
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0453-661-24-0000
0435-073-78-0000
0435-132-01-0000
0435-142-01-0000
0435-142-02-0000
0435-142-06-0000
0435-142-08-0000
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0453-661-27-0000
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1200 E 1ST ST 1200 E 1ST ST 16600 DOWNEY AVE SPC 11 24381 OPAL HILL CT 1876 FOWLER ST APT 219 PO BOX 6548 9262 NAUTILUS DR 24812 EATON LN
6644 GOLDEN OAK LN 28196 VIA SECO ST 28196 VIA SECO ST 23425 STAFFORD ST 3179 N ASHFORD AVE 8267 MILL POND DR 8267 MILL POND DR
2883 GRECO CT 18124 WEDGE PKWY # 1077 12624 VAQUERO CT 12624 VAQUERO CT 600 SAN MIGUEL CT 5671 HEIL AVE 390 EVA ST PO BOX 1089 810 TINDALO RD 121 S HOPE ST APT 504 3595 INLAND EMPIRE BLVD STE 3 17 FAIR ST PO BOX 400996 3400 ROSEWOOD ST
334 AVENIDA LEONA 745 E MADRONA ST 721 W CALDWELL ST 10418 DOROTHY AVE 2301 LOU MENK DR GOB-3W 130 E MONTECITO AVE # 203 13344 DARVIEW LN

LOS ANGELES, CA 90033	
LOS ANGELES, CA 90033	
PARAMOUNT, CA 90723	
LAGUNA NIGUEL, CA 92677	
RICHLAND, WA 99352	
BURBANK, CA 91510	
HUNTINGTON BEACH, CA 92646	
LAGUNA NIGUEL, CA 92677	
FONTANA, CA 92336	
APPLE VALLEY, CA 92308	
APPLE VALLEY, CA 92308	
PERRIS, CA 92570	
RIALTO, CA 92377	
NORTH, VA 23128	
NORTH, VA 23128	
PORT ORCHARD, WA 98366	
PALM SPRINGS, CA 92264	
RENO, NV 89511	
RANCHO CUCAMONGA, CA 91739	
RANCHO CUCAMONGA, CA 91739	
ROSEVILLE, CA 95747	
HUNTINGTON BEACH, CA 92649	
VENTURA, CA 93003	
SPRINGVILLE, CA 93265	
ARCADIA, CA 91006	
LOS ANGELES, CA 90012	
ONTARIO, CA 91764	
NEWPORT, RI 2840	
HESPERIA, CA 92340	
KINGMAN, AZ 86401	
SARASOTA, FL 34242	
RIALTO, CA 92376	
COMPTON, CA 90220	
SOUTH GATE, CA 90280	
FORT WORTH, TX 76131	
SIERRA MADRE, CA 91024	
SAN DIEGO, CA 92129	

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1840 N COLLEGE PL PO BOX 235 12513 PRAIRIE ROSE WAY 3595 INLAND EMPIRE BLVD STE 3 635 W ONTARIO AVE 9861 MISSION BLVD SPC 15 9861 MISSION BLVD SPC 15 5176 BRIAN LN 310 NASH LN 2401 W BLAKE ST	
2614 MAYNARD DR	
8933 LUNA MOUNTAIN RD	
527 BEGONIA DR	
527 BEGONIA DR	
2301 LOU MENK DR GOB-3W	
888 SANDY BEACH DR	
3595 3 INLAND EMPIRE BLVD	
646 GARDNER ST	
15937 PIPER WAY	
45139 PALOMINO RD	
529 E GRACE PL	
PO BOX 962	
2503 MACBETH AVE	
10942 CEDAR ST	
13528 PALM PL	
357 S ARROWHEAD AVE STE 7	
23286 OLD 44 DR	
626 LORI WAY	
330 CORNETTI RD	
25521 RUE DE LAC	
15460 APACHE RD	
105 WESTON PARK LONDON N8 9PR UNI	
8330 SYLVIA AVE	

LONG BEACH, CA 90815	
KUALAPUU, HI 96757	
BAKERSFIELD, CA 93312	
ONTARIO, CA 91764	
CORONA, CA 92882	
PALA, CA 92059	
JURUPA VALLEY, CA 92509	
ENCINO, CA 91436	
BILLINGS, MT 59105	
LA HABRA, CA 90631	

DUARTE, CA 91010	
APPLE VALLEY, CA 92308	
SAN LEANDRO, CA 94578	
SAN LEANDRO, CA 94578	
FORT WORTH, TX 76131	
BULLHEAD CITY, AZ 86442	
ONTARIO, CA 91764	
SOUTH LAKE TAHOE, CA 96150	
ADELANTO, CA 92301	
KING CITY, CA 93930	
SANTA ANA, CA 92701	
HELENDALE, CA 92342	
CORONA, CA 92882	
STANTON, CA 90680	
CERRITOS, CA 90703	
SAN BERNARDINO, CA 92408	
MILLVILLE, CA 96062	
PLACENTIA, CA 92870	
FENELTON, PA 16034	
ESCONDIDO, CA 92026	
APPLE VALLEY, CA 92307	
NORTHRIDGE, CA 91324	

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PO BOX 723

19650 YANAN RD 19650 YANAN RD

810 TINALDO RD 810 TINALDO RD

1002 AIRWAY RD SW 6755 ROSE AVE

1712 N BEVERLY GLEN BLVD 2809 147TH ST 26444 COMMUNITY BLVD PO BOX 537

22877 MIRIAM WAY 1117 E ARLINGTON ST 120 NE HASKEW ST

1425 W 139TH ST 22007 HURONS AVE PO BOX 10761

BONSALL, CA 92003	
APPLE VALLEY, CA 92307 LUCERNE VALLEY, CA 92356	

ARCADIA, CA 91006	
ARCADIA, CA 91006	

ALBUQUERQUE, NM 87105	
LONG BEACH, CA 90805	
LOS ANGELES, CA 90077	
URBANDALE, IA 50323	
BARSTOW, CA 92311	
BIG BEAR LAKE, CA 92315	

GRAND TERRACE, CA 92313	
COMPTON, CA 90221	
BURLESON, TX 76028	

GARDENA, CA 90249	
APPLE VALLEY, CA 92307	
SAN BERNARDINO, CA 92423	

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748 AVENIDA AMIGO

315 AVON CT PO BOX 3309 10843 ROSE PL 18 FAIR ELMS 19002 GLEDHILL ST PO BOX 2198 727 S ARDMORE AVE APT 1006 727 S ARDMORE AVE APT 1006 727 S ARDMORE AVE APT 1006 PO BOX 455 PO BOX 682

1190 MYRTLE DR 25337 RENOIT AVE 11215 200 W PO BOX 1144 6971 LURLINE AVE 20162 HWY 18 STE G 425 DEBORAH DR 425 DEBORAH DR

PO BOX 1084 10448 DES MOINES AVE 16274 MERIDIAN RD 24455 MARIE ST 9919 TOPAZ AVE APT 11 8757 LAUREL CANYON BLVD 23607 CASSEL FALL RIVER RD 1321 ELWOOD RD 15462 BELLFLOWER ST

2006 OLD HIGHWAY 395 10843 ROSE PL PO BOX 1799

DUBLIN, OH 43017	
HESPERIA, CA 92345	
ADELANTO, CA 92301	
LAGUNA NIGUEL, CA 92677	
NORTHRIDGE, CA 91324	
LUCERNE VALLEY, CA 92356	
LOS ANGELES, CA 90005	
LOS ANGELES, CA 90005	
LOS ANGELES, CA 90005	
LUCERNE VALLEY, CA 92356	
LUCERNE VALLEY, CA 92356	

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SAN BERNARDINO, CA 92410	
MORENO VALLEY, CA 92553	
SALT LAKE CITY, UT 84101	
VICTORVILLE, CA 92393	
WINNETKA, CA 91306	
APPLE VALLEY, CA 92307	
POMONA, CA 91767	
POMONA, CA 91767	

HIGHLAND PARK, IL 60035	
PORTER RANCH, CA 91326	
LUCERNE VALLEY, CA 92356	
PERRIS, CA 92570	
HESPERIA, CA 92345	
SUN VALLEY, CA 91352	
FALL RIVER MILLS, CA 96028	
SQUAW VALLEY, CA 93675	
ADELANTO, CA 92301	

FALLBROOK, CA 92028	
ADELANTO, CA 92301	
LUCERNE VALLEY, CA 92356	

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0552-021-08-0000
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PO BOX 682 PO BOX 682 10843 ROSE PL 10843 ROSE PL

321 CAMILLO RD 3734 ELIZABETH ST STE A 100 HOWE AVENUE, SUITE 100-S 19670 TONKAWAN RD 19670 TONKAWAN RD PO BOX 517 1548 E 75TH ST 3765 ELK LN PMB 5273 801 E 4TH ST # 2 21421 HWY 18 2840 W ACADEMY AVE 1548 E 77TH PL 2234 CENTRAL AVE 1967 CHEREMOYA AVE LUCERNE VALLEY, CA 92356--LUCERNE VALLEY, CA 92356--ADELANTO, CA 92301--ADELANTO, CA 92301--

SIERRA MADRE, CA 91024	
RIVERSIDE, CA 92506	
SACRAMENTO, CA 95825	State of California
APPLE VALLEY, CA 92307	
APPLE VALLEY, CA 92307	
UPLAND, CA 91785	
LOS ANGELES, CA 90001	
GRANTS PASS, OR 97527	
GILLETTE, WY 82716	
APPLE VALLEY, CA 92307	
ANAHEIM, CA 92804	
LOS ANGELES, CA 90001	
SPRING VALLEY, CA 91977	
LOS ANGELES, CA 90068	

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#### PO BOX 5242 29611 EXETER ST

14130 SAINT MARYS LN 999 W RIVERSIDE AVE STE 101 PO BOX 460 22251 SIOUX RD 7281 SVL BOX 1560 N HELEN CT

# PAHRUMP, NV 89041 LUCERNE VALLEY, CA 92356 - HOUSTON, TX 77079 - SPOKANE, WA 99201 - LUCERNE VALLEY, CA 92356 - APPLE VALLEY, CA 92308 - VICTORVILLE, CA 92395 - ONTARIO, CA 91762 -

0464-132-12-0000	735 E CARSON ST APT 1	LONG BEACH, CA 90807	
0464-132-13-0000	10248 NORTHRIDGE DR	RANCHO CUCAMONGA, CA 91737	
0464-132-14-0000	541 TWIN CREEKS WAY	SAN LUIS OBISPO, CA 93401	
0464-132-15-0000	541 TWIN CREEKS WAY	SAN LUIS OBISPO, CA 93401	
0464-132-28-0000	7215 E ARROYO HONDO RD	SCOTTSDALE, AZ 85266	
0464-132-29-0000	2165 S 7TH AVE	YUMA, AZ 85364	
233-00-001-012			
233-00-001-021			
233-00-001-022			
0464-132-33-0000	12144 AEGEAN ST	NORWALK, CA 90650	
0464-132-34-0000	26 SUNSET KEY DR	KEY WEST, FL 33040	
233-00-002-002			
0464-132-36-0000	158 LINDA CT	COLTON, CA 92324	
233-00-002-012			
233-00-002-013			
233-00-002-017			
234-00-001-001			
0464-132-41-0000	13076 WAVERLY AVE	LUCERNE VALLEY, CA 92356	
243-03-000-001			
0464-132-43-0000	999 W RIVERSIDE AVE STE 101	SPOKANE, WA 99201	
243-04-000-001			
0464-132-45-0000	30372 COVE RD	LUCERNE VALLEY, CA 92356	
0464-132-46-0000	30426 COVE RD	LUCERNE VALLEY, CA 92356	
243-10-000-001			
243-15-000-001			
0464-141-04-0000	13600 SUNDOWNER LN	LUCERNE VALLEY, CA 92356	
243-16-000-001			
0464-141-06-0000	20894 SW MCCORMICK HILL RD	HILLSBORO, OR 97123	
243-21-000-007			
243-22-101-002			
243-27-301-002			
0464-141-10-0000	24921 MUIRLANDS BLVD SPC 291	LAKE FOREST, CA 92630	
243-28-101-001			
243-33-000-001			
243-33-000-002			
249-00-002-013			
0464-141-15-0000	13651 BARNETT WAY	GARDEN GROVE, CA 92843	
0464-141-19-0000	33939 ROAD 224	NORTH FORK, CA 93643	
0464-141-20-0000	33939 ROAD 224	NORTH FORK, CA 93643	
0464-141-27-0000	29912 EXETER ST	LUCERNE VALLEY, CA 92356	
0464-141-31-0000	13600 SUNDOWNER LN	LUCERNE VALLEY, CA 92356	
0464-141-32-0000	601 PAMLAR AVE	SAN JOSE, CA 95128	
0464-151-01-0000	29611 EXETER ST	LUCERNE VALLEY, CA 92356	
250-03-401-001			

250-04-000-001

250-09-000-001 250-10-000-001 0464-151-06-0000 0464-151-06-0000 0464-151-08-0000 250-14-000-001 250-15-000-001 0464-161-01-0000 0464-161-02-0000 0464-161-03-0000 0464-161-04-0000 0464-161-05-0000 0464-191-01-0000 0464-191-02-0000 0464-191-06-0000 0464-191-07-0000 0464-191-18-0000 0464-191-22-0000 0464-191-23-0000 0464-191-24-0000 250-16-000-001 0464-191-26-0000 0464-191-27-0000 0464-191-28-0000 250-22-000-001 250-23-000-001 250-24-000-001 250-24-000-002 0464-191-33-0000 250-25-000-002 250-36-000-002 255-06-000-001 255-07-000-001 0464-191-38-0000 255-08-000-001 255-17-000-001 255-18-000-002 255-20-000-001 0464-201-05-0000 0464-201-06-0000 0464-201-20-0000 0464-201-21-0000 0464-201-22-0000 0464-201-23-0000 0464-201-24-0000

18557 VILLA CLARA ST	ROWLAND HEIGHTS, CA 91748	
18557 VILLA CLARA ST	ROWLAND HEIGHTS, CA 91748	
3902 VISTA CAMPANA N	OCEANSIDE, CA 92057	
30125 EXETER ST	LUCERNE VALLEY, CA 92356	
406 VIRGINIA DR	SAN JACINTO, CA 92583	
5822 OHIO ST	YORBA LINDA, CA 92886	
23301 RIDGE ROUTE DR SPC 139	LAGUNA HILLS, CA 92653	
535 S LAURINDA LN	ORANGE, CA 92869	
18183 BEAR VALLEY RD	HESPERIA, CA 92345	
36430 TANSY CT	LAKE ELSINORE, CA 92532	
1608 E REDWOOD AVE	ANAHEIM, CA 92805	
PO BOX 275	LUCERNE VALLEY, CA 92356	
2107 WATERSIDE CIR	WESTLAKE VILLAGE, CA 91362	
PO BOX 1376	LUCERNE VALLEY, CA 92356	
9121 ATLANTA AVE # 325	HUNTINGTON BEACH, CA 92646	
10487 11TH AVE	HESPERIA, CA 92345	
	,	
PO BOX 1575	LUCERNE VALLEY, CA 92356	
PO BOX 285	LUCERNE VALLEY, CA 92356	
946 W F ST	ONTARIO, CA 91762	
848 N RAINBOW BLVD # 2614	LAS VEGAS, NV 89107	
696 W 10TH ST	POMONA, CA 91766	
3063 SILENT WIND WAY	HENDERSON, NV 89052	
3275 RICHVIEW DR	HACIENDA HEIGHTS, CA 91745	
PO BOX 1084	HIGHLAND PARK, IL 60035	
7245 FURLONG AVE	GILROY, CA 95020	
26425 WREN ST	APPLE VALLEY, CA 92308	
999 W RIVERSIDE AVE STE 101	SPOKANE, WA 99201	
18183 BEAR VALLEY RD	HESPERIA, CA 92345	

0464-201-25-0000	36430 TANSY CT	LAKE ELSINORE, CA 92532	
255-20-000-002			
255-28-000-001			
255-29-000-001			
255-33-000-001			
260-04-000-001			
260-07-000-001			
0464-201-32-0000	PO BOX 2842	RIVERSIDE, CA 92516	
260-07-000-002			
260-08-000-001			
260-09-000-001			
260-10-000-001			
0464-201-37-0000	999 W RIVERSIDE AVE STE 101	SPOKANE, WA 99201	
0464-201-39-0000	18317 HAWTHORNE AVE	BLOOMINGTON, CA 92316	
0464-201-40-0000	999 W RIVERSIDE AVE STE 101	SPOKANE, WA 99201	
260-15-000-001			
0464-211-11-0000	1551 MOON VALLEY LN	CINCINNATI, OH 45230	
0464-211-12-0000	7737 E BRIGADE DR	KINGMAN, AZ 86401	
0464-211-13-0000	4662 AMBERWOOD AVE	LA PALMA, CA 90623	
260-22-000-001			
260-23-000-001			
260-26-000-001			
260-27-000-001			
260-35-000-001			
0464-221-03-0000	PO BOX 1419	LUCERNE VALLEY, CA 92356	
262-00-001-001			
262-00-001-002			
262-00-001-076			
263-00-001-007			
0515-011-14-0000	3190 COTTONWOOD AVE	SAN JACINTO, CA 92582	
0515-011-15-0000	3190 COTTONWOOD AVE	SAN JACINTO, CA 92582	
263-00-001-008			
0515-011-22-0000	2301 LOU MENK DR GOB-3W	FORT WORTH, TX 76131	
263-00-001-010			
263-00-001-012			
0516-341-14-0000	PO BOX 2576	BOISE, ID 83701	
0516-341-14-0000	PO BOX 2576	BOISE, ID 83701	
0516-341-14-0000	PO BOX 2576	BOISE, ID 83701	
0516-341-17-0000	2301 LOU MENK DR GOB-3W	FORT WORTH, TX 76131	
263-00-001-014			
263-00-001-016			
263-00-002-008			
263-00-002-016			
0527-031-19-0000	100 HOWE AVENUE, SUITE 100-S	SACRAMENTO, CA 95825	State of California
263-00-002-017			

264-08-000-003			
264-14-000-002			
264-15-701-001			
264-16-000-003			
264-19-000-001			
0527-071-05-0000	P.O. BOX 788104	TWENTYNINE PALMS, CA 92278	Twentynine Palms Marine Corps Ba
0527-071-09-0000	P.O. BOX 788104	TWENTYNINE PALMS, CA 92278	Twentynine Palms Marine Corps Bas
0527-071-10-0000	P.O. BOX 788104	TWENTYNINE PALMS, CA 92278	Twentynine Palms Marine Corps Ba
0527-071-11-0000	P.O. BOX 788104	TWENTYNINE PALMS, CA 92278	Department Of Defense
266-00-001-003			·
266-00-001-004			
266-00-001-006			
0527-071-16-0000	P.O. BOX 788104	TWENTYNINE PALMS, CA 92278	Twentynine Palms Marine Corps Bas
0527-091-01-0000	P.O. BOX 788104	TWENTYNINE PALMS, CA 92278	Twentynine Palms Marine Corps Ba
0656-191-17-0000	37198 LANFAIR RD G-15	ESSEX, CA 92332	
0553-161-18-0000	600 HARRISON ST, MOJAVE NATIONAL PRESERVE	SAN FRANCISCO, CA 94107	Mojave National Preserve
0553-161-20-0000			
0558-321-11-0000			
0558-321-12-0000			
0558-321-14-0000			
0558-321-15-0000			
0558-321-16-0000			
0562-091-02-0000			
0527-121-03-0000	P.O. BOX 788104	TWENTYNINE PALMS, CA 92278	Twentynine Palms Marine Corps Bas
0527-121-11-0000	P.O. BOX 788104	TWENTYNINE PALMS, CA 92278	Twentynine Palms Marine Corps Bas
0562-091-03-0000			
0562-091-04-0000			
0529-241-18-0000	469 OLD TRENTON RD	EAST WINDSOR, NJ 08512	
0529-251-01-0000	16195 SISKIYOU RD STE 210	APPLE VALLEY, CA 92307	
0529-251-04-0000	16195 SISKIYOU RD STE 210	APPLE VALLEY, CA 92307	
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Base Base Base

Base Base

Base Base

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LOS ANGELES, CA 90071

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264-21-110-075	25A HANOVER RD STE 310	FLORHAM PARK, NJ 07932	
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264-23-000-001			
264-23-000-002			

Appendix E

SCE PTC Application



**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE** 

#### **STATE OF CALIFORNIA**

**FILED** 05/02/18 04:59 PM

A1805007

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-xxx (Filed May 2, 2018)

## APPLICATION OF SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) FOR A PERMIT TO CONSTRUCT ELECTRICAL FACILITIES: ELDORADO-LUGO-MOHAVE SERIES CAPACITOR PROJECT

BETH A. GAYLORD TAMMY JONES

Attorneys 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

Date: May 2, 2018

# Southern California Edison Company (U 338-E) For A Permit To Construct Electrical Facilities: Eldorado-Lugo-Mohave Series Capacitor Project

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# Southern California Edison Company (U 338-E) For A Permit To Construct Electrical Facilities: Eldorado-Lugo-Mohave Series Capacitor Project

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## **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-xxx (Filed May 2, 2018)

# APPLICATION OF SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) FOR A PERMIT TO CONSTRUCT ELECTRICAL FACILITIES: ELDORADO-LUGO-MOHAVE SERIES CAPACITOR PROJECT

#### I.

#### **INTRODUCTION**

Pursuant to California Public Utilities Commission (Commission or CPUC), General Order 131-D (G.O. 131-D), Southern California Edison Company (SCE) respectfully submits this application (Application) for a permit to construct (PTC) authorizing SCE to construct the proposed project known as the Eldorado-Lugo-Mohave Series Capacitor Project (Proposed Project or ELM).

The Proposed Project consists of the following major components:

- Construct two new 500 kV mid-line series capacitors (i.e., the proposed Newberry Springs Series Capacitor and Ludlow Series Capacitor) and associated equipment
- Relocate, replace, or modify 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 potential overhead clearance discrepancies

- Perform minor grading at two discrepancy locations along the Lugo-Mohave 500 kV Transmission Line
- Extend or reroute approximately 2 miles of overhead and approximately 700 feet of underground 12 kV distribution circuits to provide station light and power to the proposed Newberry Springs Series Capacitor and Ludlow Series Capacitor (the distribution poles are supporting the overhead telecommunication facilities on the same route)
- Install distribution facilities to provide station light and power to three proposed fiber optic repeater sites
- Install approximately 235 miles of OPGW (173 miles on the Lugo-Mohave 500 kV Transmission Line, approximately 59 miles on the Eldorado-Mohave 500 kV Transmission Line, including approximately 3 miles of underground telecommunications facilities in the vicinity of Mohave Substation)
- Modify the ground wire peak of existing suspension towers used as splice locations for the OPGW work; some of these towers would also require minor modifications to the steel in the tower body
- Install approximately 2 miles of overhead and approximately 500 feet of underground telecommunications facilities to connect the proposed Newberry Springs Series Capacitor and Ludlow Series Capacitor to SCE's existing system as one communication path (the telecommunications facilities would share the same poles with overhead distribution)
- Install approximately 2 miles of underground telecommunications facilities to connect the proposed Newberry Springs Series Capacitor and Ludlow Series Capacitor to SCE's existing system as a second communication path
- Install underground telecommunications facilities from existing transmission structures to three fiber optic repeater sites—Barstow, Kelbaker, and Lanfair within the Lugo-Mohave 500 kV Transmission Line ROW

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- Install approximately 1,000 feet of underground telecommunications facilities within the existing Lugo, Mohave, and Eldorado Substations
- Perform modifications within the existing Lugo Substation on the existing series capacitors and install new terminating equipment; remove two existing TSPs within the substation and install two new TSPs within the substation on the Eldorado and Mohave 500 kV Transmission Lines
- Perform modifications within the existing Eldorado Substation on the existing series capacitors and upgrade the terminal equipment on the Lugo 500 kV Transmission Line
- Replace existing series capacitors on the Lugo 500 kV Transmission Line, and install new terminal equipment on the Eldorado and Lugo 500 kV Transmission Lines at the existing Mohave Substation

#### II.

#### **BACKGROUND AND SUMMARY REQUEST**

SCE is a public utility that provides electric service to a population of approximately 15 million people within an approximately 50,000-square-mile service area that encompasses 180 cities throughout Southern California. SCE's Proposed Project was approved by the California Independent System Operator (CAISO) following recommendations for approval as a policy-driven upgrade through the CAISO's Transmission Planning Process. As a policy-driven upgrade, the purpose of the Proposed Project is to integrate renewable generation and relieve area deliverability constraints.<sup>1</sup>

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<sup>&</sup>lt;sup>1</sup> The deliverability constraint that affects this area is referred to as the Desert Area Constraint in the CAISO Transmission Plan. The Desert Area Constraint has been identified in previous CAISO Transmission Planning Process studies and Generation Interconnection Planning (GIP) studies to include a group of deliverability constraints that impact the desert area. The Desert Area Constraint limits deliverability in a wide electrical area that covers several renewable zones. Generators interconnecting within these renewable zones contribute to the constraint. The need for transmission upgrades to relieve the Desert Area Constraint is analyzed for other renewables portfolios by (Continued)

The capability of the existing infrastructure is limited by the existing series capacitors and terminal equipment, and needs to be upgraded to meet the Proposed Project objectives by increasing the import capability of the existing transmission lines. These upgrades have been approved as CAISO policy-driven upgrades in the 2012-2013 and 2013-2014 Transmission Plans. Figure 1-1: Proposed Project Location in Chapter 1, PEA Summary shows the location of the Proposed Project in relation to the larger regional area.

Additionally, the Proposed Project would reduce Megawatt (MW) flow into the neighboring Los Angeles Department of Water and Power's (LADWP's) transmission system.

As such, the Proposed Project is being proposed to meet the following fundamental objectives:

- Meet the planned in-service date of June 2020 in an effort to meet the requirements as outlined and required by the California Renewables Portfolio Standard (RPS) for SCE to serve at least 33 percent of its retail load with renewable energy by 2020<sup>2</sup>
- Ensure compliance with CPUC G.O. 95 and the NESC
- Continue to provide safe and reliable electrical service
- Maintain system reliability within the Los Angeles Basin, which is defined as the Electrical Needs Area (ENA)
- Increase power flow through the existing Eldorado-Lugo, Eldorado-Mohave, and Lugo-Mohave 500 kV Transmission Lines for the purpose of increasing the

Continued from the previous page

comparing the generation behind the deliverability constraint. The CAISO analyzes this constraint as part of its annual transmission planning process.

<sup>&</sup>lt;sup>2</sup> The California RPS requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020. The CPUC implements and administers RPS compliance rules for California's retail sellers of electricity. SCE's current renewable procurement status percentages can be found on the CPUC's website (http://www.cpuc.ca.gov/RPS\_Homepage/).

amount of power delivered from California's Ivanpah Valley, Nevada, and Arizona to the ENA through the SCE system in an effort to meet requirements associated with the California RPS

- Reduce SCE's power flow into the LADWP transmission system for the purpose of mitigating power flow overloads under normal and abnormal system conditions<sup>3</sup>
- Ensure compliance with all applicable reliability planning criteria required by the North American Electric Reliability Corporation (NERC), Western Electricity Coordinating Council (WECC), and CAISO
- Integrate planned generation resources in order for those facilities to become fully deliverable<sup>4</sup>
- Meet the requirements of existing Interconnection Agreements (IAs) that require the Proposed Project to achieve FCDS for generation facilities
- Meet Proposed Project needs while minimizing environmental impacts
- Design and construct the Proposed Project in conformance with SCE's approved engineering, design, and construction standards for substation, transmission, subtransmission, and distribution system projects.

The estimated cost of the Proposed Project is approximately \$225 million in 2018 constant dollars.<sup>5</sup> A Proponent's Environmental Assessment (PEA) prepared for the Proposed

<sup>&</sup>lt;sup>3</sup> "Normal conditions" refers to system conditions where all electrical facilities are in service and operating as designed. "Abnormal conditions" refers to system conditions whereby one or more electrical system components (e.g., generator, substation transformer, line, or other major component) is out of service or not operating as designed due to planned or unplanned outages.

<sup>&</sup>lt;sup>4</sup> A generating facility is referred to as being "fully deliverable" once it has achieved Full Capacity Deliverability Status (FCDS), as defined in Appendix A of the CAISO's Fifth Replacement Electronic Tariff: https://www.caiso.com/Documents/AppendixA\_Definitions\_asof\_Jan1\_2017.pdf.

<sup>&</sup>lt;sup>5</sup> This is a conceptual estimate, prepared in advance of final engineering and prior to CPUC approval. Pension and benefits, administrative and general expenses, and allowance for funds during construction are not included in this estimate.

Project is attached to this Application. The PEA will be referenced in this Application, where appropriate, as the source of information required in an Application for a PTC<sup>6</sup> pursuant to G.O. 131-D, Section IX.B. A complete project description is located in Chapter 3 of the PEA. A summary of the Proposed Project's purpose, need, and objectives is located in Chapter 2 of the PEA.

Construction of the Proposed Project is scheduled to begin in Q2 2019 and to be completed by June 2020. A schedule for the Proposed Project is included in this Application as APPENDIX C.

Upon completion of its review of this Application, SCE requests that the Commission issue and certify an appropriate environmental document and issue a PTC authorizing SCE to construct the Proposed Project set forth in this Application and the attached PEA within the timelines set forth in Section III.H of this Application.

#### III.

#### **STATUTORY AND PROCEDURAL REQUIREMENTS**

#### A. <u>Applicant</u>

The applicant is Southern California Edison Company (SCE), an electric public utility company organized and existing under the laws of the State of California. SCE's principal place of business is 2244 Walnut Grove Avenue, Post Office Box 800, Rosemead, California 91770. Please address correspondence or communications in regard to this Application to:

<sup>&</sup>lt;sup>6</sup> Other required information for a PTC application (*e.g.* Balance Sheet, Articles of Incorporation, *etc.*) is contained in this Application or its appendices.

Tammy Jones Senior Attorney Southern California Edison Company Post Office Box 800 Rosemead, California 91770 Phone: (626) 302-6634 Facsimile: (626) 302-1910 Email: tammy.jones@sce.com

With a copy to:

Case Administration Southern California Edison Company 8631 Rush St. Rosemead, California 91770 Phone: (626) 302-6906 Fax: (626) 302-5060 Email: case.admin@sce.com

### B. <u>Articles of Incorporation</u>

A copy of SCE's Certificate of Restated Articles of Incorporation, effective on March 2, 2006, and presently in effect, certified by the California Secretary of State, was filed with the Commission on March 14, 2006, in connection with Application No. 06-03-020, and is incorporated herein by this reference pursuant to Rule 2.2 of the Commission's Rules of Practice and Procedure.

A copy of SCE's Certificate of Determination of Preferences of the Series D Preference Stock filed with the California Secretary of State on March 7, 2011, and presently in effect, certified by the California Secretary of State, was filed with the Commission on April 1, 2011, in connection with Application No. 11-04-001, and is incorporated herein by this reference.

A copy of SCE's Certificate of Determination of Preferences of the Series E Preference Stock filed with the California Secretary of State on January 12, 2012, and a copy of SCE's Certificate of Increase of Authorized Shares of the Series E Preference Stock filed with the California Secretary of State on January 31, 2012, and presently in effect, certified by the California Secretary of State, were filed with the Commission on March 5, 2012, in connection with Application No. 12-03-004, and are incorporated herein by this reference.

A copy of SCE's Certificate of Determination of Preferences of the Series F Preference Stock filed with the California Secretary of State on May 5, 2012, and presently in effect, certified by the California Secretary of State, was filed with the Commission on June 29, 2012, in connection with Application 12-06-017, and is by reference made a part hereof.

A copy of SCE's Certificate of Determination of Preferences of the Series G Preference Stock filed with the Secretary of State on January 24, 2013, and presently in effect, certified by the California Secretary of State, was filed with the Commission on January 31, 2013, in connection with Application No. 13-01-016, and is by reference made a part hereof.

A copy of SCE's Certificate of Preferences of the Series H Preference Stock filed with the California Secretary of State on February 28, 2014, and presently in effect, certified by the California Secretary of State, was filed with the Commission on March 24, 2014, in connection with Application 14-03-013, and is by reference made a part hereof.

A copy of SCE's Certificate of Determination of Preferences of the Series J Preference Stock filed with the California Secretary of State on August 19, 2015, and presently in effect, certified by the California Secretary of State, was filed with the Commission on October 2, 2015, in connection with Application No. 15-10-001, and is by reference made a part hereof.

A copy of SCE's Certificate of Determination of Preferences of the Series K Preference Stock, filed with the California Secretary of State on March 2, 2016, and presently in effect, certified by the California Secretary of State, was filed with the Commission on April 1, 2016, in connection with Application No. 16-14-001, and is by reference made a part hereof.

A copy of SCE's Certificate of Determination of Preferences of the Series L Preference Stock filed with the California Secretary of State on June 20, 2017, and presently in effect, certified by the California Secretary of State, was filed with the Commission on June 30, 2017, in connection with Application No. 17-06-030, and is incorporated herein by this reference.

Certain classes and series of SCE's capital stock are listed on a "national securities exchange" as defined in the Securities Exchange Act of 1934, and copies of SCE's latest Annual Report to Shareholders and its latest proxy statement sent to its shareholders has been filed with

the Commission with a letter of transmittal dated March 16, 2018, pursuant to Commission General Order Nos. 65-A and 104-A.

#### C. Balance Sheet and Statement of Income

APPENDIX A to this Application contains copies of SCE's balance sheet and statement of income for the period ending December 31, 2017. The balance sheet reflects SCE's utility plant at original cost, less accumulated depreciation.

Since 1954, pursuant to Commission Decision No. 49665 dated February 16, 1954, in Application No. 33952, as modified by Decision No. 91799 in 1980, SCE has utilized straightline remaining life depreciation for computing depreciation expense for accounting and ratemaking purposes in connection with its operations.

Pursuant to Commission Decision No. 59926, dated April 12, 1960, SCE uses accelerated depreciation for income tax purposes and "flows through" reductions in income tax to customers within the Commission's jurisdiction for property placed in service prior to 1981. Consistent with Decision No. 93848 in OII-24, SCE uses the Accelerated Cost Recovery System (ACRS) and Modified Accelerated Cost Recovery System (MACRS) for federal income tax purposes and "normalizes" reductions in income tax to customers for property placed in service after 1980 in compliance with the Economic Recovery Tax Act of 1981, and also in compliance with the Tax Reform Act of 1986. Pursuant to Decision No. 88-01-061, dated January 28, 1988, SCE uses a gross of tax interest rate in calculating the AFUDC Rate, and income tax normalization to account for the increased income tax expense occasioned by the Tax Relief Act of 1986 provisions requiring capitalization of interest during construction for income tax purposes.

#### D. Description of Southern California Edison Company

SCE is a corporation organized and existing under the laws of the State of California, and is primarily engaged in the business of generating, purchasing, transmitting, distributing and selling electric energy for light, heat and power in portions of central and southern California as a public utility subject to the jurisdiction of the California Public Utilities Commission. SCE's properties, which are located primarily within the State of California, consist mainly of

hydroelectric and thermal electric generating plants, together with transmission and distribution lines and other property necessary in connection with its business.

#### E. <u>Service Territory</u>

SCE's service territory is located in 15 counties in central and southern California, consisting of Fresno, Imperial, Inyo, Kern, Kings, Los Angeles, Madera, Mono, Orange, Riverside, Santa Barbara, San Bernardino, Tulare, Tuolumne,<sup>2</sup> and Ventura Counties, and includes approximately 201 incorporated communities as well as outlying rural territories. A list of the counties and municipalities served by SCE is attached hereto as APPENDIX B. SCE also supplies electricity to certain customers for resale under tariffs filed with the Federal Energy Regulatory Commission.

# F. <u>Location of Items Required in Permit to Construct Pursuant to G.O. 131-D Section</u> IX.B

Much of the information required to be included in a PTC application pursuant to G.O. 131-D, Section IX.B is found in the ELM Proponent's Environmental Assessment (PEA).

Required PTC application information has been cross-referenced to the PEA in the following text. The PTC application requirements of G.O. 131-D, Section IX.B are in bold italics, and the PEA references follow in plain text.

- 1. <u>A description of the proposed power line or substation facilities, including the</u> proposed power line route; proposed power line equipment, such as tower design and appearance, heights, conductor sizes, voltages, capacities, substations, switchyards, etc., and a proposed schedule for authorization, construction, and commencement of operation of the facilities.
  - Descriptions of the Proposed Project are found throughout the PEA, including in Chapter 1, Chapter 2, Chapter 3, Chapter 4, and Chapter 5.

<sup>&</sup>lt;sup>2</sup> SCE provides electric service to a small number of customer accounts in Tuolumne County and is not subject to franchise requirements.

- The proposed Eldorado-Lugo-Mohave Series Capacitor Project is described in Sections 1.1 ("Project Components"), 1.2 ("Project Location"), 3.0 ("Project Description"), 3.1 ("Project Location"), 3.4 ("Proposed Project"), and 3.5 ("Project Components") [including Subsections 3.5.1 ("Transmission Line"), 3.5.2 ("Poles/Towers"), 3.5.3 ("Conductor/Cable"), 3.5.4 ("Mid-Line Series Capacitors"), and 3.5.5 ("Modifications to Existing Substations]. This work is illustrated in Figures 3-1 ("Proposed Project Overview Map"), 3-2 ("Existing and Proposed System Map"), 3-3 ("Existing and Proposed System Schematic"), 3-4 ("Typical Site Plan for the Fiber Optic Repeater Sites"), 3-5 ("Typical Elevation for the Fiber Optic Repeater Sites"), 3-6 ("Typical Single-Circuit 500 kV Dead-End Tower"), 3-7 ("Typical Single-Circuit 500 kV Suspension Tower"), 3-12 ("Typical Mid-Line Series Capacitor Layout"), 3-13 ("Typical Mid-Line Series Capacitor Profile"), and Attachment 4.1-C ("Visual Simulations"). Locations are illustrated in Figures 1-1 ("Proposed Project Location") and 3-1 ("Proposed Project Overview Map"), as well as PEA Appendix E: Detailed Route Map.
- The Proposed Project Schedule is discussed in Section 3.7.9 ("Construction Schedule") and attached to this Application as APPENDIX C.

# 2. <u>A map of the proposed power line routing or substation location showing</u> <u>populated areas, parks, recreational areas, scenic areas, and existing electrical</u> <u>transmission or power lines within 300 feet of the proposed route or substation.</u>

 Regional maps and aerial photographs showing existing features, including land uses and populated areas are included in PEA Figures 1-1 ("Proposed Project Location"), 1-2 ("Electrical Needs Area"), 3-1 ("Proposed Project Overview Map"), 3-2 ("Existing and Proposed System Map"), 4.14-1 ("Public Services Within the Vicinity of the Proposed Project"), and 4.18-1 ("Planned and Proposed Projects Within 5 Miles of the Proposed Project").

- Maps and aerial photographs of the parks, recreational areas, scenic areas, and land uses in the vicinity of the Proposed Project are provided in PEA Attachments 4.1-A ("Characterization Photographs"), 4.10-A ("Existing Land Uses Within 1 Mile of Proposed Project"), 4.10-C ("General Plan Designations Within 1 Mile of the Proposed Project"), and 4.10-D ("Zoning Designations Within 1 Mile of the Proposed Project"); and Figures 4.14-1 ("Public Services Within the Vicinity of the Proposed Project"), and 4.15-1 ("Recreational Facilities Within 1 Mile of the Proposed Project")
- 3. <u>Reasons for adoption of the power line route or substation location selected,</u> <u>including comparison with alternative routes or locations, including the</u> <u>advantages and disadvantages of each.</u>
  - Reasons for the construction of the Project, including the challenges and additional environmental impacts associated with alternative sites, are discussed in PEA Section 5.2 ("Description of Project Alternatives and Impact Analysis"), including Subsections 5.2.1 ("Electrical System, Substation Site, and Transmission Line Route Evaluation Methodology"), 5.2.2 ("Alternatives Comparison Summary"), and 5.2.3 ("Environmental Impacts"). As discussed therein, System Alternative 1 and System Alternative 2 would not reduce environmental impacts associated with the construction of the Proposed Project. Therefore, System Alternative 1 and System Alternative 2 were eliminated and were not further analyzed within the PEA. Alternative sites for the Newberry Springs and the Ludlow mid-line Series Capacitors are also discussed within Section 2.2.2

("Alternatives Comparison Summary"), as well as within the individual resources sections in Chapter 4 ("Environmental Impact Assessment Summary").

- 4. <u>A listing of the governmental agencies with which proposed power line route or</u> <u>substation location reviews have been undertaken, including a written agency</u> <u>response to applicant's written request for a brief position statement by that</u> <u>agency. (Such listing shall include The Native American Heritage Commission,</u> <u>which shall constitute notice on California Indian Reservation Tribal</u> <u>governments.) In the absence of a written agency position statement, the utility</u> <u>may submit a statement of its understanding of the position of such agencies.</u>
  - PEA Section 1.4 ("Agency Coordination") describes the outreach that SCE has conducted to date with lead agencies and other agencies crossed by the Proposed Project, including the Bureau of Land Management, the National Parks Service, the County of San Bernardino, the City of Hesperia, and the Town of Apple Valley in California; and Clark County, the City of Boulder, and the unincorporated Community of Laughlin in Nevada. Section 1.4.8 ("Local Tribes") describes the coordination with the Native American Heritage Commission and local tribes to date.
  - <u>Bureau of Land Management/National Park Service</u>: On June 15, 2016, SCE met with representatives from the Bureau of Land Management's (BLM's) Barstow and Needles offices and the National Park Service (NPS) to introduce several projects to them, including the Proposed Project. The BLM and NPS recommended combining some of the projects proposed in the region in order to reduce their workload. Additionally, the BLM and NPS did not determine which agency would be the Lead Agency and asked for additional time to make this decision. After several internal BLM meetings, it was decided the BLM's Desert District office

would be the Lead Agency for the Proposed Project. A Standard Form 299 application was submitted to the BLM on June 14, 2016.

County of San Bernardino, California: In May 2016, SCE met with staff from the Third District of the County of San Bernardino, including Supervisor James Ramos, Mark Lundquist (field representative), and Christina Garcia (executive aide) to introduce several projects to them, including the Proposed Project. There were no major concerns raised at the time and they appreciated the information regarding the Proposed Project.

Additionally, in May 2016, SCE met with Robert Lovingood, the First District supervisor of the County of San Bernardino, and provided him with a brief overview of the Proposed Project. There were no concerns raised at the time, and he appreciated the information regarding the Proposed Project.

In October 2016, SCE met with Supervisor Ramos' staff in San Bernardino regarding vegetation management. At this meeting, SCE provided a brief overview of the Proposed Project. Additionally, in October 2016, SCE provided a briefing and a fact sheet to Supervisor Lovingood's entire staff. Furthermore, notification letters were sent via email to County staff to let them know that desert tortoise (Gopherus agassizii) surveys were being conducted in the Proposed Project area. There were no major concerns raised at the time and they appreciated the information regarding the Proposed Project.

Individual emails were sent in October 2016 to the County Board of Supervisors and key County staff with the fact sheet and a link to the Proposed Project's website. No concerns were raised and no follow up was requested.

In November 2016, SCE met with Molly Wiltshire, Supervisor Ramos' Deputy Chief of Staff, regarding another project in the unincorporated community of Lucerne Valley. At the conclusion of the meeting, there were no major concerns regarding the Proposed Project.

<u>Clark County, Nevada</u>: In October and November 2016, Proposed Project fact sheets were sent to Kim Jenkins, Principle Environmental Specialist from the Clark County Boulder City Conservation Authority and to Sami Real, Planning Manager, from the Clark County Department of Comprehensive Planning. Additionally, a fact sheet was sent to Steve Sisolak, a Clark County commissioner.

In December 2016, SCE had a phone conversation with Sami Real from the Clark County Department of Comprehensive Planning. Ms. Real requested additional information regarding the Proposed Project. The scope of work for the Proposed Project was sent to Ms. Real twice in January 2017. Ms. Real is reviewing the Proposed Project to determine potential permitting requirements.

- <u>City of Hesperia, California</u>: In November 2016, SCE briefed the City of Hesperia's Engineering Department on the Proposed Project. The Engineering Department did not have any major concerns regarding the Proposed Project.
- <u>City of Boulder City, Nevada</u>: In October 2016, a Proposed Project fact sheet and environmental inspections letter was sent to Brok Armantrout, the city's community development director. Additionally, SCE also met with Mr. Armantrout in October. SCE did not receive a response from the City of Boulder City.
- <u>Town of Apple Valley, California</u>: In October 2016, a Proposed Project fact sheet and environmental inspections letter was sent to Town Manager

Frank Robinson. SCE did not receive a response from the Town of Apple Valley.<sup>8</sup>

<u>Unincorporated Community of Laughlin, Nevada</u>: In October 2016, a
 Proposed Project fact sheet was mailed to Town Manager Brian Paulson.
 Additionally, in October, SCE met with Mr. Paulson, and he indicated that
 he appreciated receiving the information regarding the Proposed Project.
 Mr. Paulson did not raise any issues.

Local Tribes:

- Although SCE is not the CEQA Lead Agency responsible for tribal consultations per Public Resources Code Section 21080.3.1, SCE submitted a request to the Native American Heritage Commission (NAHC) for a search of its Sacred Lands File and a list of Native American individuals and organizations that might have knowledge of cultural resources in the Proposed Project area. SCE then sent letters, via U.S. mail, to the following tribes: Chemehuevi Indian Tribe, Colorado River Indian Tribes, Fort Mojave Tribe, Las Vegas Tribe of Paiute Indians, Moapa Band of Paiute Indians, Morongo Band of Mission Indians, San Manuel Band of Mission Indians, Timbi-sha Shoshone Tribe, Twenty-Nine Palms Band of Mission Indians, Kawaiisu Tribe, Pahrump Paiute Tribe, San Fernando Band of Mission Indians, and Serrano Nation of Indians.<sup>9</sup>
- The San Manuel Band of Mission Indians sent an email to the BLM and SCE on July 9, 2017. A meeting was scheduled on August 22<sup>nd</sup> and was

<sup>8</sup> The Proposed Project does not actually cross the incorporated Town of Apple Valley; Proposed Project information was provided as a courtesy.

<sup>&</sup>lt;sup>9</sup> If additional information is required regarding the letters that were sent to the local tribes, please *see* Appendix C of the PEA.

held with the BLM, SCE, and San Manuel Band of Mission Indians to discuss the project; no specific concerns were discussed. An email dated July 25, 2017, was received by SCE from the Twenty-Nine Palms Band of Mission Indians. They indicated there is an increased possibility of encountering cultural resources during the construction process and that they look forward to continuing to work with the BLM and SCE on this undertaking. Additionally, SCE received an email from the Colorado River Indian Tribe on August 4, 2017 in response to the letters that were sent out by SCE. A conference call was scheduled on August 28, 2017 to discuss the project with no specific concerns discussed during the meeting.

For additional information regarding the emails that were received from the local tribes, please see APPENDIX G to this Application.

- 5. <u>A PEA or equivalent information on the environmental impact of the project in</u> <u>accordance with the provisions of CEQA and this Commission's Rules of</u> <u>Practice and Procedure Rule 2.4 [formerly 17.1 and 17.3]. If a PEA is filed, it</u> <u>may include the data described in Items a. through d. above.</u>
  - The PEA is attached to this Application.

### G. <u>Compliance with G.O. 131-D, Section X</u>

G.O. 131-D, Section X, requires applications for a PTC to describe measures taken to reduce potential exposure to electric and magnetic fields (EMF) generated by the proposed facilities. A complete description of EMF-related issues is contained in SCE's EMF Field Management Plan for the Project, which is attached as APPENDIX F to this Application.

### H. <u>Compliance with Rule 2.1(c)</u>

In compliance with Rule 2.1(c) of the Commission's Rules of Practice and Procedure (California Code of Regulations, Title 20), SCE is required to state in this Application "[t]he proposed category for the proceeding, the need for hearing, the issues to be considered including relevant safety considerations, and a proposed schedule." SCE proposes to categorize this Application as a rate-setting proceeding. SCE anticipates that a hearing will not be necessary. This proceeding involves the Commission's: (1) environmental review of the Project in compliance with the California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.) and the Commission's G.O. 131-D; and (2) issuance of a PTC authorizing SCE to construct the Project. SCE workers and contractors are required to implement and enforce the SCE Accident Prevention Manual (APM), which is a companywide manual containing safety rules and policies. These rules and policies cover work performed in every organizational unit, from office and workplace safety to construction sites, and for operating and maintaining substations and steam generation stations.

Date	Event	
May 2, 2018	PTC Application Filed	
June 1, 2018	PTC Application Accepted as Complete	
August 2018	Draft CEQA Document Issued	
December 2018	Final CEQA document issued	
February 2019	Proposed Decision	
March 2019	Commission Final Decision, PTC Issued	

SCE suggests the following proposed schedule for this Application:

#### I. <u>Statutory Authority</u>

This Application is made pursuant to the provisions of CEQA, G.O. 131-D, the Commission's Rules of Practice and Procedure, and prior orders and resolutions of the Commission.

#### J. <u>Public Notice</u>

Pursuant to G.O. 131-D, Section XI.A, notice of this Application shall be given: (1) to certain public agencies and legislative bodies; (2) to owners of property located on or within 300 feet of the project area; (3) by advertisement in a newspaper or newspapers of general

circulation; and (4) by posting a notice on-site and off-site at the project location. SCE has given, or will give, proper notice within the time limits prescribed in G.O. 131- D. A copy of the Notice of Application for a Permit to Construct and list of newspapers which will publish the notice are contained in APPENDIX D. A copy of the Certificate of Service of Notice of Application for a Permit to Construct and a service list are contained in APPENDIX E.

### K. <u>Supporting Appendices and Attachments</u>

<u>Appendices A</u> through <u>G</u> and the PEA listed below are made a part of this Application:

APPENDIX A	Balance Sheet and Statement of Income as of December 31, 2017
<u>APPENDIX B</u>	List of Counties and Municipalities Served by SCE
<u>APPENDIX C</u>	Eldorado-Lugo-Mohave Series Capacitor Project Schedule
APPENDIX D	Notice of Application for a Permit to Construct
<u>APPENDIX E</u>	Certificate of Service of Notice of Application for a Permit to Construct
<u>APPENDIX F</u>	Field Management Plan
APPENDIX G	Agency Consultation
ATTACHMENT	Southern California Edison's Eldorado-Lugo- Mohave Series Capacitor Project PEA

## L. <u>Compliance with Rule 2.5</u>

Rule 2.5 of the Commission's Rules of Practice and Procedure provides that an applicant include a deposit to be applied to the costs the Commission incurs to prepare a negative declaration or an environmental impact report when the Commission is acting as the lead agency pursuant to CEQA. In accordance with Rule 2.5, SCE is enclosing a deposit to be applied to the

costs the Commission incurs to prepare a negative declaration or an environmental impact report for the Project.

#### M. <u>Request for Ex Parte Relief</u>

SCE requests that the relief requested in this Application be provided *ex parte* as provided for in G.O. 131-D, Section IX.B.6.

### N. <u>Request for Timely Relief</u>

SCE requests the Commission to issue a decision within the time limits prescribed by Government Code Section 65920 *et seq*. (the Permit Streamlining Act) as provided for in G.O. 131-D, Section IX.B.6.

Moreover, as addressed in the same subsection of G.O. 131-D, SCE requests that the Commission refrain from assigning an Administrative Law Judge to this proceeding, unless a valid protest is received by the Commission, and in the absence of any valid protest allow the Energy Division to process this Application.<sup>10</sup>

## IV.

## **CONCLUSION**

SCE respectfully requests the Commission to issue a PTC authorizing SCE to construct the Project described in this Application and PEA. SCE further requests that the relief be provided *ex parte* and within the time limits prescribed by the Permit Streamlining Act.

<sup>10</sup> GO 131-D, Section IX.B.6.

Respectfully submitted,

## SOUTHERN CALIFORNIA EDISON COMPANY

/s/ Paul Grigaux

By: Paul J. Grigaux Vice President Transmission, Substations and Operations

/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

May 2, 2018

## VERIFICATION

I am an officer of the applicant corporation herein, and am authorized to make this

verification on its behalf. I am informed and believe that the matters stated in the foregoing

document are true.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 2nd day of May, 2018, at Rosemead, California.

/s/ Paul J. Grigaux

By: Paul J. Grigaux Vice President Transmission, Substations and Operations SOUTHERN CALIFORNIA EDISON COMPANY

# **APPENDIX A**

# **Balance Sheet and Statement of Income as of**

December 31, 2017

#### SOUTHERN CALIFORNIA EDISON COMPANY

(h) A balance sheet as of the latest available date, together with an income statement covering the period from close of last year for which an annual report has been filed with the Commission to the date of the balance sheet attached to the application.

#### STATEMENT OF INCOME TWELEVE MONTHS ENDED DECEMBER 31, 2017

(In millions)

OPERATING REVENUE	\$ 12,254
OPERATING EXPENSES:	
Purchase power and fuel	4,873
Other operation and maintenance	2,671
Depreciation, decommissioning and amortization	2,032
Property and other taxes	372
Impairment and other charges	716
Other operating income	(8)
Total operating expenses	 10,656
OPERATING INCOME	1,598
Interest and other income	145
Interest expense	(589)
Other expenses	 (48)
INCOME BEFORE INCOME TAX	1,106
INCOME TAX	 (30)
NET INCOME	1,136
Less: Preferred and preference stock dividend requirements	 124
NET INCOME AVAILABLE FOR COMMON STOCK	\$ 1,012

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### SOUTHERN CALIFORNIA EDISON COMPANY

#### BALANCE SHEET DECEMBER 31, 2017 ASSETS (in millions)

UTILITY PLANT:	
Utility plant, at original cost	\$ 44,761
Less- accumulated provision for depreciation and decommissioning	 9,355
	35,406
Construction work in progress	3,175
Nuclear fuel, at amortized cost	127
	 38,708
OTHER PROPERTY AND INVESTMENTS:	77
Nonutility property - less accumulated depreciation of \$91 Nuclear decommissioning trusts	4,440
Other investments	4,440 52
Other Investments	 4,569
	4,303
CURRENT ASSETS:	
Cash and equivalents	515
Receivables, less allowances of \$53 for uncollectible accounts	693
Accrued unbilled revenue	212
Inventory	242
Income tax receivables	229
Prepaid expenses	228
Derivative assets	105
Regulatory assets	703
Other current assets	160
	 3,087
DEFERRED CHARGES:	4.044
Regulatory assets	4,914
Other long-term assets	 237
	5,151
	\$ 51,515

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### SOUTHERN CALIFORNIA EDISON COMPANY

#### BALANCE SHEET DECEMBER 31, 2017 CAPITALIZATION AND LIABILITIES (in millions)

CAPITALIZATION:	
Common stock	\$ 2,168
Additional paid-in capital	671
Accumulated other comprehensive loss	(19)
Retained earnings	9,607
Common shareholder's equity	12,427
Preferred and preference stock	2,245
Long-term debt	10,428
Total capitalization	25,100
CURRENT LIABILITIES:	
Short-term debt	1,238
Current portion of long-term debt	479
Accounts payable	1,519
Accrued taxes	24
Customer deposits	281
Derivative liabilities	1
Regulatory liabilities	1,121
Other current liabilities	1,224
	 5,887
DEFERRED CREDITS:	
Deferred income taxes and credits	5,890
Derivative liabilities	0
Pensions and benefits	483
Asset retirement obligations	2,892
Regulatory liabilities	8,614
Other deferred credits and other long-term liabilities	2,649
	 20,528
	\$ 51,515

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# **APPENDIX B**

# List of Counties and Municipalities Served by SCE



# **Incorporated Cities and Counties Served by SCE**

#### COUNTIES

		COON	IILS		
Fresno	Kern	Madera	R	Riverside	Tuolumne
Imperial	Kings	Mono	S	an Bernardino	Tulare
Inyo	Los Angeles	Orange	S	anta Barbara	Ventura
		CITI	ES		
Adelanto	Commerce	Hesperia	Los Alamitos	Port Hueneme	Simi Valley
Agoura Hills	Compton	Hidden Hills	Lynwood	Porterville	South El Monte
Alhambra	Corona	Highland	Malibu	Rancho	South Gate
Aliso Viejo	Costa Mesa	Huntington Beach	Mammoth Lak		South Pasadena
Apple Valley	Covina	Huntington Park	Manhattan Beach	Rancho Mirage	Stanton
Arcadia	Cudahy	Indian Wells	Maywood	Rancho Palos Verdes	Tehachapi
Artesia	Culver City	Industry	McFarland	Rancho Santa	Temecula
Avalon	Cypress	Inglewood	Menifee	Margarita	Temple City
Baldwin Park	Delano	Irvine	Mission Viejo	Redlands	Thousand Oaks
Barstow	Desert Hot	Irwindale	Monrovia	Redondo Beacl	h Torrance
Beaumont	Springs	Jurupa Valley	Montclair	Rialto	Tulare
Bell	Diamond Bar	La Canada	Montebello	Ridgecrest	Tustin
Bell Gardens	Downey	Flintridge	Monterey Park	Rolling Hills	Twentynine Palms
Bellflower	Duarte	La Habra	Moorpark	Rolling Hills	Upland
Beverly Hills	Eastvale	La Habra	Moreno Valley	Estates	Valencia
Big Bear Lake	El Monte	Heights	Murrieta	Rosemead	Victorville
Bishop	El Segundo	La Mirada	Newport Beac	San Bernarding	D Villa Park
Blythe	Exeter	La Palma	Norco	<sup>:n</sup> San Buenaventura	Visalia
Bradbury	Farmersville	La Puente		San Dimas	Walnut
Brea	Fillmore	La Verne	Norwalk	San Fernando	West Covina
Buena Park	Fontana	Laguna Beach	Ojai Optorio	San Gabriel	West Hollywood
Calabasas	Fountain Valley	Laguna Hills	Ontario	San Jacinto	Westlake Village
California City	Fullerton	Laguna Niguel	Orange	San Marino	Westminster
Calimesa	Garden Grove	Laguna Woods	Oxnard	Santa Ana	Whittier
Camarillo	Gardena	Lake Elsinore	Palm Desert	Santa Barbara	Wildomar
Canyon Lake	Glendora	Lake Forest	Palm Springs	Santa Clarita	Woodlake (Three
Carpinteria	Goleta	Lakewood	Palmdale	Santa Fe	Rivers)
Carson	Grand Terrace	Lancaster	Palos Verdes	Springs	Yorba Linda
Cathedral City	Hanford	Lawndale	Paramount	Santa Monica	Yucaipa
Cerritos	Hawaiian Gardens	Lindsay	Perris	Santa Paula	Yucca Valley
Chino	Hawthorne	Loma Linda	Pico Rivera	Seal Beach	

Hermosa Beach

Hemet

Chino Hills

Claremont

Sierra Madre

Signal Hill

Lomita

Long Beach

Placentia

Pomona

# **APPENDIX C**

# Eldorado-Lugo-Mohave Series Capacitor Project Schedule

# Proposed Eldorado Lugo Mohave Series Capacitor Project Schedule

Date	Event
May 2018	Application filed
June 2018	Application accepted as complete
August 2018	Draft CEQA document issued
December 2018	Final CEQA document issued
February 2019	Proposed Decision issued
March 2019	Final Decision issued
Q2 2019	Construction Start
June 2020	Commence Operation

# **APPENDIX D**

# Notice of Application for a Permit to Construct

## NOTICE OF APPLICATION FOR A PERMIT TO CONSTRUCT

### ELDORADO-LUGO-MOHAVE SERIES CAPACITOR PROJECT

Filing Date: May 2, 2018

**Proposed Project:** Southern California Edison Company (SCE) has filed an application with the California Public Utilities Commission (CPUC) for construction of the Eldorado-Lugo-Mohave Series Capacitor Project (Proposed Project). The primary purpose of the Proposed Project is to meet the California Renewables Portfolio Standard (RPS) requirements established for SCE to serve at least 33 percent of its retail load with renewable energy by 2020.

The Proposed Project is needed to address a transmission constraint which limits deliverability of renewable generation into California by increasing the capability of the existing electric infrastructure. Construction will take place primarily along the Eldorado-Lugo, Eldorado-Mohave and Lugo-Mohave 500 kilo-volt (kV) Transmission Lines located in San Bernardino County, California, and Clark County, Nevada. Additional nearby distribution line and telecommunications construction will take place in support of the Proposed Project.

**<u>Project Description</u>**: The Proposed Project consists of the following major components (please also refer to the enclosed map below):

#### **Series Capacitor Stations**

 Construction of two new 500 kV mid-line series capacitors—the Newberry Springs Series Capacitor and Ludlow Series Capacitor on approximately 3.3- and 3.2-acre sites within the Eldorado-Lugo and Lugo-Mohave 500 kV Transmission Line rights-of-way, respectively, near SCE Pisgah Substation in unincorporated San Bernardino County, California, located approximately 35 miles east of Barstow, north of Interstate 40.

#### **Transmission Lines and Towers**

• Correction of 16 overhead line clearance discrepancies involving relocation, replacement, or modification of existing transmission, subtransmission, and distribution facilities including minor grading along the Eldorado-Lugo, Eldorado-Mohave, and Lugo-Mohave 500 kV Transmission Lines.

#### Substations

- Modifications within the existing Eldorado, Lugo, and Mohave Substations within San Bernardino County, California; Clark County, Nevada; and Boulder City, Nevada, respectively, including:
  - Replacing existing series capacitors at Mohave Substation
  - Modification of existing series capacitors at Lugo and Eldorado Substations
  - Removal of two tubular steel poles (TSPs) and installation of two new TSPs at Lugo Substation
  - Installation of new terminal equipment at Eldorado, Lugo, and Mohave Substations

### **Distribution and Telecommunications**

- Installation of distribution facilities to provide station light and power to three proposed fiber optic repeater sites in unincorporated San Bernardino County, California.
- Installation of distribution facilities to provide station light and power to the proposed Newberry Springs Series Capacitor and Ludlow Series Capacitor sites.
- Removal of an existing overhead ground wire (OHGW), modification of existing towers to support optical ground wire (OPGW), and installation of approximately 235 miles of overhead OPGW, which includes approximately 3 miles of underground telecommunications facilities in the vicinity of the Mohave Substation.
- Installation of overhead and underground telecommunication facilities including the installation of three fiber optic repeater sites within the Lugo-Mohave 500 kV Transmission Line rights-of-way in unincorporated San Bernardino County, California

Construction is scheduled to begin in 2nd Quarter of 2019, and the Proposed Project is expected to be operational by June 2020.

<u>Electric and Magnetic Fields (EMF) Compliance</u>: The CPUC requires utilities to employ "no-cost" and "low-cost" measures to reduce public exposure to magnetic fields. In accordance with "EMF Design Guidelines"

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(Decisions 93-11-013 and 06-01-042.), the Proposed Project would implement a combination of the following measures:

- 1. Install mid-line series capacitors in undeveloped areas
- 2. Place substation series capacitors away from the substation property lines
- 3. Utilize taller structure heights in areas with potential overhead discrepancies
- 4. Relocate under-build distribution circuits on 115 kV structures
- 5. Increase conductor ground clearance

**Environmental Review:** SCE has prepared a Proponent's Environmental Assessment (PEA) of potential environmental impacts created by the construction and operation of the Proposed Project. The PEA concludes that with the implementation of Applicant-Proposed Measures, the majority of the potential significant environmental effects associated with the Proposed Project would be reduced to less than significant levels. However, the cultural resources technical reports are still under review by the U.S. Bureau of Land Management and a decision will be made whether or not there are any significant impacts to the cultural resources associated with the Proposed Project.

Pursuant to the California Environmental Quality Act (CEQA), the CPUC's Energy Division will conduct an independent review of the proposed project's environmental impacts. Depending on the results of its review, the Energy Division is expected to issue a Mitigated Negative Declaration that the Proposed Project will not result in any significant environmental impacts or an environmental impact report (EIR) identifying the significant environmental impacts and alternatives to avoid or reduce them.

**Public Participation:** The public may participate in the environmental review by submitting comments on the Notice of Intent to Approve a Negative Declaration, or on the Notice of Preparation of EIR and draft EIR, and by participating in any scoping meetings or public meetings that may be conducted. For information on the environmental review, contact the CPUC's Energy Division at <u>enviroteam@cpuc.ca.gov</u> or (415) 703-2126.

Persons wishing to present testimony in evidentiary hearings and/or legal briefing on all other issues, including project need and cost, EMF compliance, require party status. Persons may obtain party status by filing a protest to the application by **June 1, 2018**, in compliance with CPUC General Order 131-D and the CPUC's Rules of Practice and Procedure Rule 2.6, or by making a motion for party status at any time in compliance with Rule 1.4 (posted at <u>www.cpuc.ca.gov</u>).

The public may communicate their views regarding the application by writing to the CPUC at 505 Van Ness Avenue, San Francisco, CA 94102, or by emailing the Public Advisor at <u>public.advisor@cpuc.ca.gov</u>. In addition, the CPUC may, at its discretion, hold a public participation hearing in order to take oral public comment.

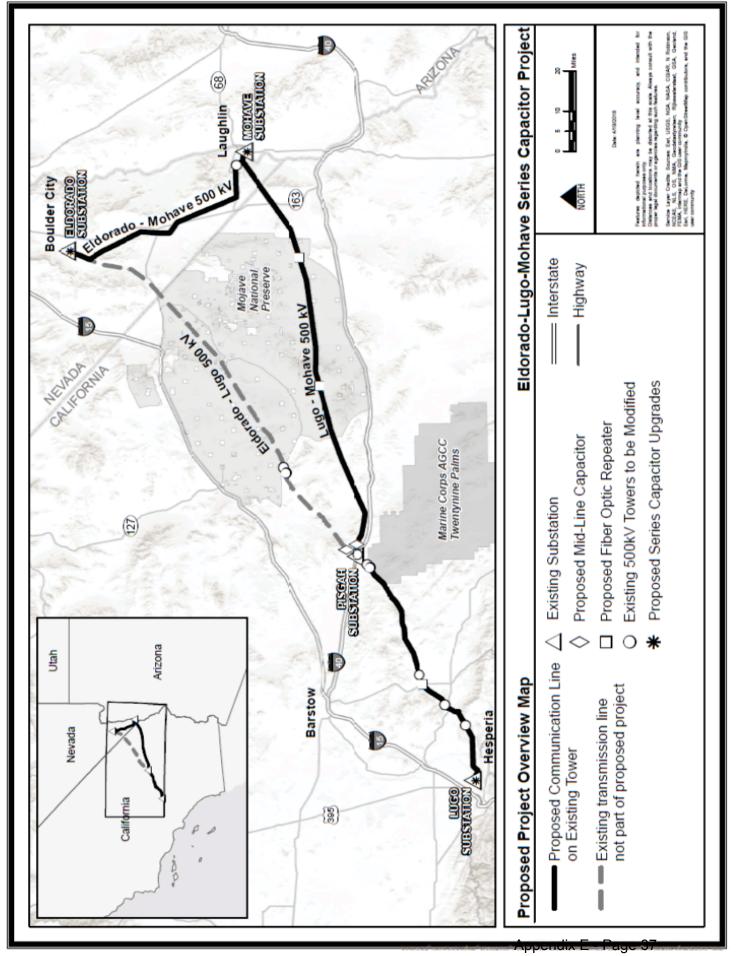
**Document Subscription Service:** The CPUC's free online subscription service sends subscribers an email notification when any document meeting their subscription criteria is published on the CPUC's website, such as documents filed in a CPUC proceeding (e.g., notices of hearings, rulings, briefs and decisions). To sign up to receive notification of documents filed in this proceeding (or other CPUC matters), visit www.cpuc.ca.gov/subscription.

<u>Contacts</u>: For assistance from the CPUC, please contact the Public Advisor in San Francisco at (415)703-2074 (<u>public.advisor@cpuc.ca.gov</u>) or toll free at (866) 849-8391.

To review a copy of SCE's application, or to request further information about the Proposed Project, please contact:

Selya J. Arce, Sr. Project Manager 2 Innovation Way Pomona, CA 91768

Phone: 909-274-3709 Email: Selya.Arce@sce.com



## NEWSPAPER PUBLISHING NOTICE OF PERMIT TO CONSTRUCT APPLICATION

#### **The Daily Press**

13891 Park Avenue Victorville, CA 92392

#### Hesperia Star

13891 Park Avenue Victorville, CA 92392

#### Lucerne Valley Leader

13891 Park Avenue Victorville, CA 92392

#### **Boulder City Review**

508 Nevada Way, Suite 1 Boulder City, NV 89005

### Las Vegas Review-Journal

1111 W. Bonanza Road P.O. Box 70 Las Vegas, NV 89125

#### Laughlin Nevada Times

2435 Miracle Mile Bullhead City, AZ 86442

# **APPENDIX E**

# Certificate of Service of Notice of Application for a Permit to Construct

#### **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-xxx (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 the NOTICE OF APPLICATION OF SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) FOR A PERMIT TO CONSTRUCT ELECTRICAL FACILITIES: ELDORADO LUGO MOHAVE SERIES CAPACITOR PROJECT, on all parties identified on the attached lists.

Service was affected by one or more means below:

- Placing the copies in sealed envelopes and causing such envelopes to be delivered via USPS First Class Mail.
  - Lists: Eldorado Lugo Mohave Series Capacitor Project Agency List Eldorado Lugo Mohave Series Capacitor Project 300-Foot List Eldorado Lugo Mohave Series Capacitor Project Interested Party List

Executed this May 2, 2018, at Rosemead, California.

<u>/s/ Angelica Gamboa</u>

Angelica Gamboa Legal Administrative Assistant SOUTHERN CALIFORNIA EDISON COMPANY

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

# Eldorado-Lugo-Mohave Series Capacitor Project Agency Mailing List for Notice of Application

Stove Sicolak Chair	Volanda King	Nancy Amundson
Steve Sisolak, Chair	Yolanda King	Nancy Amundsen
Clark County Commission	Clark County - County Manager	Clark County - Director of Planning
500 S. Grand Central Pkwy.	500 S. Grand Central Pkwy. 500 S. Grand Central Pkwy.	
Las Vegas, NV 89155	Las Vegas, NV 89155	Las Vegas, NV 89155
J. Dapper, Chair	Rod Woodbury, Mayor	Alfonso Noyola, City Manager
Clark County Planning Commission	Boulder City	Boulder City
500 S. Grand Central Pkwy.	401 California Avenue	401 California Avenue
Las Vegas, NV 89155	Boulder City, NV 89005	Boulder City, NV 89005
Michael Mays, Planning Director	Fritz McDonald, Chair	Robert A. Lovingood, Chairman
Boulder City	Boulder City Planning Commission	Board of Supervisors
401 California Avenue	401 California Avenue	San Bernardino County
Boulder City, NV 89005	Boulder City, NV 89005	385 N. Arrowhead Avenue
		San Bernardino, CA 92415
Janice Rutherford	James Ramos	Gary McBride, CEO
Supervisor, Second District	Supervisor, Third District	San Bernardino County
San Bernardino County	San Bernardino County	385 N. Arrowhead Avenue
385 N. Arrowhead Avenue	385 N. Arrowhead Avenue	
		San Bernardino, CA 92415-0120
San Bernardino, CA 92415	San Bernardino, CA 92415	
Terri Rahhal, Planning Director	Jonathan Weldy, Chair	Russell Blewett, Mayor
San Bernardino County	Planning Commission	City of Hesperia
385 N. Arrowhead Avenue	San Bernardino County	9700 Seventh Avenue
San Bernardino, CA 92415	385 N. Arrowhead Avenue	Hesperia, CA 92345
	San Bernardino, CA 92415	
Nils Bentsen, City Manager	Jeff Codega, Principal Planner	Tom Murphy, Chair
City of Hesperia	City of Hesperia	Planning Commission
9700 Seventh Avenue	9700 Seventh Avenue	City of Hesperia
Hesperia, CA 92345	Hesperia, CA 92345	9700 Seventh Avenue
		Hesperia, CA 92345
Richard Corey, Executive Officer	Curt Hagman, Vice-Chairman	Dana Cole, P.G., Eng. Geologist
California Air Resources Board	Supervisor, Fourth District	401 Certification Unit CalEPA –
P.O. Box 2815	San Bernardino County	Water Board, LA Region
Sacramento, CA 95812	385 N. Arrowhead Avenue	320 W. 4th St., 2nd Floor
	San Bernardino, CA 92415	Los Angeles, CA 90013-2343
Edward Randolph, Energy Div Dir	Allison Brown, CPUC Public Advisor	Drew Bohan, Executive Director
California Public Utilities Commission	California Public Utilities Comm.	California Energy Commission
	505 Van Ness Avenue	1516 Ninth Street
505 Van Ness Avenue		
San Francisco, CA 94102	San Francisco, CA 94102	Sacramento, CA 95814
Malcolm Dougherty, Director	Gary Cathey, Director	John Laird, Secretary
Department of Transportation	Dept of Transportation	California Resources Agency
P.O. Box 942873	Div. of Aeronautics - MS 40	1416 Ninth St Suite 1311
Sacramento, CA 94273-0001	P. O. Box 942874	Sacramento, CA 95814
	Sacramento, CA 94274-0001	
Charlton H. Bonham, Director	Jennifer Kent, Director	Eileen Sobeck, Executive Director
California Dept. of Fish and Wildlife	Department of Health Services	State Water Resources Control Brd
1416 9th Street, 12th Floor	P.O. Box 997413, MS 0000	P.O. Box 100
Sacramento, CA 95814	Sacramento, CA 95899-7413	Sacramento, CA 95812-0100
Julianne Polanco, SHPO	Victor Globa, Environmental Splst	Patty Kouyoumdjian, Exec. Officer
Calif. Office of Historic Preservation	FAA-West-Pac Region Airports Div	Water Regional Board 6
1725 23rd Street, Suite 100	15000 Aviation Blvd. – Rm 3024	15095 Amargosa Rd. Bldg 2-Suite 210
Sacramento, CA 95816-7100	Lawndale, California 90261	Victorville, CA 92394

Brad Poiriez, Executive Director	John Bulinski, District Director	Regional Director-Region 8
Mojave Desert Air Quality	California Department of	Federal Bldg – Dept. Fish & Wildlife
Management District	Transportation - District 8	2800 Cottage Way, Room W-2606
14306 Park Ave	464 W. 4th Street	Sacramento, CA 95825-1846
		Sacialitetito, CA 95825-1840
Victorville, CA 92392	San Bernardino, CA 92401	
Danette Woo	Greg Miller, Deputy Dist. Manager	Gayle Marrs-Smith, Field Manager
Environmental Compliance	U.S. Bureau of Land Mgmt (CA)	U.S. Bureau of Land Mgmt
Mohave National Preserve	California Desert District	4701 North Torrey Pines Drive
2701 Barstow Rd.	22835 Calle San Juan de Los Lagos	Las Vegas, NV 89130
Barstow, CA 92311	Moreno Valley, CA 92553	
Tony Wasley	Dave Emme, Administrator	Stephanie Mullen, Executive Director
Director - Nevada Dept. of Wildlife	Nevada Div. Environmental Protection	Public Utilities Comm. of Nevada
1100 Valley Road	901 S. Stewart Street, Suite 4001	1150 E. William Street
Reno, NV 89512	Carson City, NV 89701	Carson City, NV 89701
Rudy Malfabon, P.E., Director	Anne-Marie Cuneo	Antal Szijj, Section Chief
Nevada Department of Transportation	Director of Regulatory Operations	U.S. Army Corps of Engineers –
1263 South Stewart Street	Public Utilities Comm. of Nevada	Regulatory Division
Carson City, NV 89712	1150 E. William Street	2151 Alessandro Dr. Ste. 110
	Carson City, NV 89701	Ventura, CA 93001
Bradley Crowell, Director	Dr. Terry Fulp, Regional Director	Jose L. Angel, Executive Officer
Nevada Dept of Natural Resources &	Bureau of Reclamation	Water Regional Board 7
Conservation	Lower Colorado Regional Office	73-720 Fred Waring Drive, Suite 100
901 S. Stewart St., Ste. 1003	P. O. Box 61470	Palm Desert, CA 92260
Carson City, NV 89701	Boulder City, NV 89006	
Jennifer Lucchesi, Executive Director	Eric M. Johnson, Administrator	
California State Lands Commission	Nevada State Parks	
California State Lands Commission 100 Howe Avenue, Suite 100 South	Nevada State Parks 901 S. Stewart St 5th Fl Ste 5005	

		PROPERTY CITY, STATE, ZIP		
APN	PROPERTY ADDRESS	CODE	MAILING ADDRESS	MAILING CITY, STATE, ZIP CODE
0357-044-48			5252 PENDLETON ST	SAN DIEGO, CA 92109
0357-441-24	WHITEHAVEN ST	OAK HILLS, CA 92344	1839 CALLE LA PAZ	ROWLAND HEIGHTS, CA 91748
0357-451-02	6525 ESCONDIDO AVE	OAK HILLS, CA 92344	3024 ARAPAHO ST	NORCO, CA 92860
0357-671-31	PRAIRIE TRL	OAK HILLS, CA 92344	527 WILLOW PL	LA VERNE, CA 91750
0357-671-37	13289 STUVELING ST	OAK HILLS, CA 92344	13289 STUVELING ST	OAK HILLS, CA 92344
0357-671-38			PO BOX 800	ROSEMEAD, CA 91770
0357-671-41			PO BOX 5004	VICTORVILLE, CA 92393
0357-671-42	6025 ESCONDIDO AVE	HESPERIA, CA 92345	6025 ESCONDIDO AVE	HESPERIA, CA 92345
0397-013-03	LAKE ARROWHEAD	HESPERIA, CA 92345	PO BOX 700	LAKE ARROWHEAD, CA 92352
0397-013-04	7186 ARROWHEAD LAKE RD	HESPERIA, CA 92345	PO BOX 700	LAKE ARROWHEAD, CA 92352
0397-013-23	7250 ARROWHEAD LAKE RD	HESPERIA, CA 92345	7250 ARROWHEAD LAKE RD	HESPERIA, CA 92345
0397-013-24	ARROW LAKE RD	HESPERIA, CA 92345	PO BOX 400356	HESPERIA, CA 92340
0397-013-25			217 PERUVIAN AVE STE 2	PALM BEACH, FL 33480
0397-022-07			19 CREST CIR	CORONA DEL MAR, CA 92625
0397-022-14			PO BOX 645	CALIMESA, CA 92320
0397-023-05			27431 SILVER CREEK DR	SAN JUAN CAPISTRANO, CA 92675
0397-023-06			55 OAK VALLEY DR	NOVATO, CA 94947
0397-023-07			55 OAK VALLEY DR	NOVATO, CA 94947
0397-023-08			55 OAK VALLEY DR	NOVATO, CA 94947
0397-023-15			55 OAK VALLEY DR	NOVATO, CA 94947
0397-023-16	6367 ARROWHEAD LAKE RD	HESPERIA, CA 92345	PO BOX 400785	HESPERIA, CA 92340
0397-023-19	6263 ARROWHEAD LAKE RD	HESPERIA, CA 92345	30 OSMEN OR	HESPERIA, CA 92345
0397-023-20	6268 KAMORA WAY	HESPERIA, CA 92345	6261 ARROWHEAD LAKE RD	HESPERIA, CA 92345
0397-023-21	6224 ARROWHEAD LAKE RD	HESPERIA, CA 92345	6224 ARROWHEAD LAKE RD	HESPERIA, CA 92345
0397-023-25	LAS FLORES	HESPERIA, CA 92345	1550 S BLUE RIVER RD	SALEM, IN 47167
0397-023-29			55 OAK VALLEY DR	NOVATO, CA 94947
0397-052-13	LAS FLORES	HESPERIA, CA 92345	9960 W CHEYENNE AVE STE 212	LAS VEGAS, NV 89129
0397-052-14	LAS FLORES	HESPERIA, CA 92345	7425 E STONE CREEK LN	ANAHEIM, CA 92808
0397-052-16			PO BOX 645	CALIMESA, CA 92320
0397-071-11			10043 GOTHIC AVE	NORTH HILLS, CA 91343
0397-082-06			10043 GOTHIC AVE	NORTH HILLS, CA 91343
0397-082-07			21325 TONO RD	APPLE VALLEY, CA 92308

0397-082-09			39515 167TH ST E	PALMDALE, CA 93591
0397-082-13			9960 W CHEYENNE AVE STE 212	LAS VEGAS, NV 89129
0397-082-15			10043 GOTHIC AVE	NORTH HILLS, CA 91343
0397-082-17			10043 GOTHIC AVE	NORTH HILLS, CA 91343
0397-082-18			10043 GOTHIC AVE	NORTH HILLS, CA 91343
0397-082-20			91 HOOLU PL	EWA BEACH, HI 96706
0397-082-21			18080 SANTA ANABELLA	FOUNTAIN VALLEY, CA 92708
0397-082-22			4228 WHITESIDE ST	LOS ANGELES, CA 90063
0397-082-26			14853 DURHAM CIR	MORENO VALLEY, CA 92555
0397-082-27			302 PINE AVE	LONG BEACH, CA 90802
0397-082-28			1420 REXFORD AVE	PASADENA, CA 91107
0397-082-29			1420 REXFORD AVE	PASADENA, CA 91107
0397-082-30			20267 KAYNE ST	CORONA, CA 92881
0397-082-46			PO BOX 3282	MERCED, CA 95344
0397-082-47			32472 AZORES RD	DANA POINT, CA 92629
0397-082-51			10750 BENNETT DR	FONTANA, CA 92337
0397-082-52			2651 CEDAR AVE	LONG BEACH, CA 90806
0397-082-53			20265 LIVORNO WAY	NORTHRIDGE, CA 91326
0397-082-54			250 S GRAMERCY PL	LOS ANGELES, CA 90004
0397-082-55			PO BOX 753	SAN JUAN CAPISTRANO, CA 92693
0397-151-04			851 PEPPER ST	EL SEGUNDO, CA 90245
0397-151-07			10300 4TH AVE	HESPERIA, CA 92345
0397-151-08			PO BOX 1830	COSTA MESA, CA 92628
0397-151-12			9960 W CHEYENNE AVE STE 212	LAS VEGAS, NV 89129
0397-151-13			8420 FAIRTON ST	PARAMOUNT, CA 90723
0397-151-20			10043 GOTHIC AVE	NORTH HILLS, CA 91343
0397-151-21			9960 W CHEYENNE AVE STE 212	LAS VEGAS, NV 89129
0398-031-34			9700 SEVENTH AVE.	HESPERIA, CA 92345
0398-031-42	ARROWHEAD LAKE RD	HESPERIA, CA 92345	32063 PACIFICA DR	RANCHO PALOS VERDES, CA 90275
0405-162-01			10043 GOTHIC AVE	NORTH HILLS, CA 91343
0405-171-46			6807 BRISA LN	RANCHO MURIETA, CA 95683
0405-391-14			1560 E FLORENCE AVE	LOS ANGELES, CA 90001
0405-391-15	14078 SUMMIT VALLEY RD	HESPERIA, CA 92345	3809 S BIRCH ST	SANTA ANA, CA 92707
0405-391-18			3192 TEMESCAL AVE	NORCO, CA 92860

0405-391	-20		5996 RIMVIEW CT	RIVERSIDE, CA 92506
0405-391	-22		18379 ORANGE ST	HESPERIA, CA 92345
0405-391	-37		PO BOX 800	ROSEMEAD, CA 91770
0405-391	-38		1560 E FLORENCE AVE	LOS ANGELES, CA 90001
0405-391	-39		4516 30TH ST NW	WASHINGTON, DC 20008
0405-391	-41		4516 30TH ST NW	WASHINGTON, DC 20008
0405-391	-42		4516 30TH ST NW	WASHINGTON, DC 20008
0405-391	-44		1560 E FLORENCE AVE	LOS ANGELES, CA 90001
0405-391	-45		1560 E FLORENCE AVE	LOS ANGELES, CA 90001
0405-391	-49 14065 SUMMIT VALLEY RD	HESPERIA, CA 92345	3809 S BIRCH ST	SANTA ANA, CA 92707
0405-391	-50		PO BOX 410	LONG BEACH, CA 90801
0405-391	-51		PO BOX 410	LONG BEACH, CA 90801
0405-391	-52		2301 LOU MENK DR GOB-3W	FORT WORTH, TX 76131
0405-391	-53		PO BOX 400214	HESPERIA, CA 92340
0405-401	-07 14345 SUMMIT VALLEY RD	HESPERIA, CA 92345	PO BOX 2078	CRESTLINE, CA 92325
0405-401	-15		PO BOX 2078	CRESTLINE, CA 92325
0405-401	-16 14243 SUMMIT VALLEY RD	HESPERIA, CA 92345	PO BOX 2078	CRESTLINE, CA 92325
0405-401	-17		PO BOX 2078	CRESTLINE, CA 92325
0405-401	-20		5833 FREMONT ST	RIVERSIDE, CA 92504
0405-401	-21 5925 TELEPHONE CANYON RD	HESPERIA, CA 92345	15309 YEW CT	FONTANA, CA 92335
0405-401	-24		808 NE 113TH AVE	PORTLAND, OR 97220
0405-401	-26		3107 CAROLWOOD LN	TORRANCE, CA 90505
0405-401	-27 14409 SUMMIT VALLEY RD	HESPERIA, CA 92345	5420 RUTILE ST	RIVERSIDE, CA 92509
0405-401	-29		1838 RUNAWAY CIR	COLTON, CA 92324
0405-401	-30 5875 TELEPHONE CANYON RD	HESPERIA, CA 92345	1838 RUNAWAY CIR	COLTON, CA 92324
0405-401	-36		2301 LOU MENK DR GOB-3W	FORT WORTH, TX 76131
0405-401	-38 14125 SUMMIT VALLEY RD	HESPERIA, CA 92345	3809 S BIRCH ST	SANTA ANA, CA 92707
0405-401	-39		3809 S BIRCH ST	SANTA ANA, CA 92707
0405-401	-40 TELEPHONE CANYON RD	HESPERIA, CA 92345	13375 MESQUITE ST	OAK HILLS, CA 92344
0405-411	-04		919 WALBURG ST	GREEN COVE SPRINGS, FL 32043
0405-411	-06		213 S REESE PL	BURBANK, CA 91506
0405-411	-07		31951 VIA ARARAT DR	BONSALL, CA 92003
0405-411	-10		5833 FREMONT ST	RIVERSIDE, CA 92504
0405-411	-11		5833 FREMONT ST	RIVERSIDE, CA 92504

0405-411-12			1325 N BRAND BLVD APT 2	GLENDALE, CA 91202
0405-411-13			8672 BRENTFORD RD	SAN GABRIEL, CA 91775
0405-411-14			26608 PRESIDENT AVE	SAN PEDRO, CA 90731
0405-411-15			16000 EL CENTRO ST	HESPERIA, CA 92345
0405-411-18			11911 HWY 138	SUMMIT VALLEY, CA 92345
0432-022-35	8747 CORTO RD	APPLE VALLEY, CA 92308	39885 RUSTIC GLEN DR	TEMECULA, CA 92591
0432-022-37	20333 TUSSING RANCH RD	APPLE VALLEY, CA 92308	8726 CORTO RD	APPLE VALLEY, CA 92308
0432-023-01	SANTA ROSA RD	APPLE VALLEY, CA 92308	3595 INLAND EMPIRE BLVD STE 3	ONTARIO, CA 91764
0432-023-06			3351 SHAWN WAY	HAYWARD, CA 94541
0432-023-07			1415 N MUSTANG AVE	ORANGE, CA 92869
0432-023-08			2357 LARIAT LN	WALNUT CREEK, CA 94596
0432-023-22			12369 DOWNEY AVE	DOWNEY, CA 90242
0432-023-23			12369 DOWNEY AVE	DOWNEY, CA 90242
0432-023-27			9622 OXFORD RD	PHELAN, CA 92371
0432-023-28	26626 HAZEL RD	APPLE VALLEY, CA 92308	1770 N ARROWHEAD AVE	SAN BERNARDINO, CA 92405
0432-023-41			PO BOX 2581	YUCCA VALLEY, CA 92286
0432-023-51	SANTA ROSA RD	APPLE VALLEY, CA 92307	515 E G ST	COLTON, CA 92324
0432-023-56			12751 SUSSEX CIR	GARDEN GROVE, CA 92840
0432-023-57			4730 E MAYCHELLE DR	ANAHEIM, CA 92807
0432-032-01	LAS FLORES	APPLE VALLEY, CA 92308	13689 HWY 138	HESPERIA, CA 92345
0432-071-06	BOWEN RANCH RD	APPLE VALLEY, CA 92308	3815 MINNEKAHTA DR	RAPID CITY, SD 57702
0432-071-08	BOWEN RANCH RD	APPLE VALLEY, CA 92308	3815 MINNEKAHTA DR	RAPID CITY, SD 57702
0432-071-16			24921 MOHR DR	HAYWARD, CA 94545
0432-071-17			2314 N LOWELL LN	SANTA ANA, CA 92706
0432-071-18			24921 MOHR DR	HAYWARD, CA 94545
0432-071-21			608 W GAILLARD ST	GLENDORA, CA 91740
0432-071-22	BOWEN RANCH RD	APPLE VALLEY, CA 92308	3815 MINNEKAHTA DR	RAPID CITY, SD 57702
0432-071-24	BOWEN RANCH RD	APPLE VALLEY, CA 92308	3815 MINNEKAHTA DR	RAPID CITY, SD 57702
0432-071-29			28726 ARROYO VISTA DR	HIGHLAND, CA 92346
0432-231-10	8390 MILPAS DR	APPLE VALLEY, CA 92308	8390 MILPAS DR	APPLE VALLEY, CA 92308
0433-041-02	BOWEN RANCH RD	APPLE VALLEY, CA 92308	3815 MINNEKAHTA DR	RAPID CITY, SD 57702
0433-091-10			6407 ARNOLD WAY	BUENA PARK, CA 90620
0433-091-11			14313 TEDFORD DR	WHITTIER, CA 90604
0433-091-12			PO BOX 1221	CHINO HILLS, CA 91709

0433-091-13			15785 LORENE DR	VICTORVILLE, CA 92395
0433-091-14			5352 W WASHINGTON BLVD	LOS ANGELES, CA 90016
0433-121-08			3024 TREESDALE DR	LAS VEGAS, NV 89134
0433-121-09			111 OVAL RD	IRVINE, CA 92604
0433-121-10			111 OVAL RD	IRVINE, CA 92604
0433-121-11			111 OVAL RD	IRVINE, CA 92604
0433-121-12			111 OVAL RD	IRVINE, CA 92604
0433-121-14			9484 IROQUOIS AVE	APPLE VALLEY, CA 92308
0435-062-03	HIGH RD	APPLE VALLEY, CA 92307	810 TINNAIO RD	ARCADIA, CA 91006
0435-062-10			3441 PEDLEY AVE	NORCO, CA 92860
0435-062-13			4231 N ST # 101	IRVING, TX 75038
0435-062-14			PO BOX 8105	NEWPORT BEACH, CA 92658
0435-062-15			175 CALVERT DR # 205	CUPERTINO, CA 95014
0435-062-18			PO BOX 8105	NEWPORT BEACH, CA 92658
0435-062-23			8566 TRINITY CIR UNIT 820D	HUNTINGTON BEACH, CA 92646
0435-062-24			450 E 246TH PL	CARSON, CA 90745
0435-062-25			1484 N ALTADENA DR	PASADENA, CA 91107
0435-062-49			6644 GOLDEN OAK LN	FONTANA, CA 92336
0435-062-50	1/2 MI	APPLE VALLEY, CA 92308	26523 BLANCHARD GROVE DR	KATY, TX 77494
0435-062-51			3641 N GAREY AVE	POMONA, CA 91767
0435-062-52			5070 DASSIA WAY	OCEANSIDE, CA 92056
0435-062-53	JOSHUA RD	LUCERNE VALLEY, CA 92356	PO BOX 8159	CALABASAS, CA 91372
0435-062-54			1048 W 4200 S	OGDEN, UT 84405
0435-062-55			432 SEMINOLE AVE	PLACENTIA, CA 92870
0435-072-03	HWY 18	APPLE VALLEY, CA 92308	6815 N 2ND ST	PHOENIX, AZ 85012
0435-072-04	JOSHUA RD	LUCERNE VALLEY, CA 92356	6815 N 2ND ST	PHOENIX, AZ 85012
0435-072-05			9506 SILENT HILLS LN	LONE TREE, CO 80124
0435-073-01			1200 E 1ST ST	LOS ANGELES, CA 90033
0435-073-02			1200 E 1ST ST	LOS ANGELES, CA 90033
0435-073-04			16600 DOWNEY AVE SPC 11	PARAMOUNT, CA 90723
0435-073-05			24381 OPAL HILL CT	LAGUNA NIGUEL, CA 92677
0435-073-08			1876 FOWLER ST APT 219	RICHLAND, WA 99352
0435-073-09			PO BOX 6548	BURBANK, CA 91510
0435-073-13			9262 NAUTILUS DR	HUNTINGTON BEACH, CA 92646

0425 072 45				
0435-073-15			24812 EATON LN	LAGUNA NIGUEL, CA 92677
0435-073-16			PO BOX 800	ROSEMEAD, CA 91770
0435-073-19	HIGHWAY 18	LUCERNE VALLEY, CA 92356	6644 GOLDEN OAK LN	FONTANA, CA 92336
0435-073-47	28196 VIA SECO ST	APPLE VALLEY, CA 92308	18 E STATE ST	REDLANDS, CA 92373
0435-073-48	28196 VIA SECO ST	APPLE VALLEY, CA 92308	28196 VIA SECO ST	APPLE VALLEY, CA 92308
0435-073-49	28128 VIA SECO ST	APPLE VALLEY, CA 92308	23425 STAFFORD ST	PERRIS, CA 92570
0435-073-50			3179 N ASHFORD AVE	RIALTO, CA 92377
0435-073-51			8267 MILL POND DR	NORTH, VA 23128
0435-073-52			8267 MILL POND DR	NORTH, VA 23128
0435-073-59			PO BOX 742	BREMERTON, WA 98337
0435-073-78	28252 STATE HIGHWAY 18	APPLE VALLEY, CA 92307	2883 GRECO CT	PALM SPRINGS, CA 92264
0435-132-01	LOVELACE CANYON RD	LUCERNE VALLEY, CA 92356	18124 WEDGE PKWY # 1077	RENO, NV 89511
0435-142-01	DESERT VIEW RD	LUCERNE VALLEY, CA 92356	12624 VAQUERO CT	RANCHO CUCAMONGA, CA 91739
0435-142-02	DESERT VIEW RD	LUCERNE VALLEY, CA 92356	12624 VAQUERO CT	RANCHO CUCAMONGA, CA 91739
0435-142-06			600 SAN MIGUEL CT	ROSEVILLE, CA 95747
0435-142-08			9521 HALEKULANI DR	GARDEN GROVE, CA 92841
0435-142-13			390 EVA ST	VENTURA, CA 93003
0435-142-15			PO BOX 1089	SPRINGVILLE, CA 93265
0435-142-16			810 TINDALO RD	ARCADIA, CA 91006
0435-142-22			121 S HOPE ST APT 504	LOS ANGELES, CA 90012
0435-142-35			3595 INLAND EMPIRE BLVD STE 3	ONTARIO, CA 91764
0435-152-04			17 FAIR ST	NEWPORT, RI 02840
0435-152-05	SANTA ROSA RD	LUCERNE VALLEY, CA 92356	PO BOX 400996	HESPERIA, CA 92340
0435-152-06			3400 ROSEWOOD ST	KINGMAN, AZ 86401
0435-152-07			3395 PUTTING GREEN CT	OCEANSIDE, CA 92056
0435-152-12			745 E MADRONA ST	RIALTO, CA 92376
0435-152-14	CANYON VIEW RD	LUCERNE VALLEY, CA 92356	PO BOX 38	MOSINEE, WI 54455
0435-152-25			10418 DOROTHY AVE	SOUTH GATE, CA 90280
0435-152-27			2301 LOU MENK DR GOB-3W	FORT WORTH, TX 76131
0435-152-28			130 E MONTECITO AVE # 203	SIERRA MADRE, CA 91024
0435-152-36			13344 DARVIEW LN	SAN DIEGO, CA 92129
0435-152-40			PO BOX 2411	LA HABRA, CA 90632
0435-311-01			1840 N COLLEGE PL	LONG BEACH, CA 90815
0435-311-02			PO BOX 235	KUALAPUU, HI 96757
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0435-311-03			12513 PRAIRIE ROSE WAY	BAKERSFIELD, CA 93312
0435-311-04	CANYON VIEW RD	LUCERNE VALLEY, CA 92356	3595 INLAND EMPIRE BLVD STE 3	ONTARIO, CA 91764
0435-311-06			635 W ONTARIO AVE	CORONA, CA 92882
0435-311-08			9861 MISSION BLVD SPC 15	RIVERSIDE, CA 92509
0435-311-09			9861 MISSION BLVD SPC 15	RIVERSIDE, CA 92509
0435-311-13			5176 BRIAN LN	ENCINO, CA 91436
0435-311-14			310 NASH LN	BILLINGS, MT 59105
0435-311-36			2401 W BLAKE ST	LA HABRA, CA 90631
0435-641-10			2614 MAYNARD DR	DUARTE, CA 91010
0435-641-14			8933 LUNA MOUNTAIN RD	APPLE VALLEY, CA 92308
0435-641-15	8933 LUNA MOUNTAIN RD	APPLE VALLEY, CA 92308	8933 LUNA MOUNTAIN RD	APPLE VALLEY, CA 92308
0435-641-16			8933 LUNA MOUNTAIN RD	APPLE VALLEY, CA 92308
0435-641-17	8987 LUNA MOUNTAIN RD	APPLE VALLEY, CA 92308	8933 LUNA MOUNTAIN RD	APPLE VALLEY, CA 92308
0435-641-20	LUNA MOUNTAIN RD	APPLE VALLEY, CA 92308	527 BEGONIA DR	SAN LEANDRO, CA 94578
0435-641-21	LUNA MOUNTAIN RD	APPLE VALLEY, CA 92308	527 BEGONIA DR	SAN LEANDRO, CA 94578
0435-651-03			2301 LOU MENK DR GOB-3W	FORT WORTH, TX 76131
0435-651-06			888 SANDY BEACH DR	BULLHEAD CITY, AZ 86442
0435-651-07			3595 3 INLAND EMPIRE BLVD	ONTARIO, CA 91764
0435-651-13			646 GARDNER ST	SOUTH LAKE TAHOE, CA 96150
0435-651-14			1642 MERION WAY APT 40E	SEAL BEACH, CA 90740
0435-651-19			45139 PALOMINO RD	KING CITY, CA 93930
0435-651-20			529 E GRACE PL	SANTA ANA, CA 92701
0435-651-22	CANYON VIEW RD	APPLE VALLEY, CA 92308	PO BOX 962	HELENDALE, CA 92342
0435-651-23	SUTTER RD	LUCERNE VALLEY, CA 92356	2503 MACBETH AVE	CORONA, CA 92882
0435-651-29			10942 CEDAR ST	STANTON, CA 90680
0435-651-30			13528 PALM PL	CERRITOS, CA 90703
0435-651-33	CANYON VIEW RD	LUCERNE VALLEY, CA 92356	357 S ARROWHEAD AVE STE 7	SAN BERNARDINO, CA 92408
0435-651-34			23286 OLD 44 DR	MILLVILLE, CA 96062
0435-651-36			626 LORI WAY	PLACENTIA, CA 92870
0435-651-38			330 CORNETTI RD	FENELTON, PA 16034
0435-651-39			25521 RUE DE LAC	ESCONDIDO, CA 92026
0435-651-40			15460 APACHE RD	APPLE VALLEY, CA 92307
0435-651-41			APARTMENT 10 73B DRAYTON ISLINGTON L	C
0435-651-47			8330 SYLVIA AVE	NORTHRIDGE, CA 91324

0451-011-11			25751 GOLDEN ROD CIR	LAGUNA HILLS, CA 92653
0451-011-17			19650 YANAN RD	APPLE VALLEY, CA 92307
0451-011-18			19650 YANAN RD	APPLE VALLEY, CA 92307
0451-011-24			810 TINALDO RD	ARCADIA, CA 91006
0451-011-25			810 TINALDO RD	ARCADIA, CA 91006
0452-011-05			1002 AIRWAY RD SW	ALBUQUERQUE, NM 87105
0452-011-06			6755 ROSE AVE	LONG BEACH, CA 90805
0452-011-10			1712 N BEVERLY GLEN BLVD	LOS ANGELES, CA 90077
0452-011-12			2809 147TH ST	URBANDALE, IA 50323
0452-011-14			26444 COMMUNITY BLVD	BARSTOW, CA 92311
0452-011-17			PO BOX 537	BIG BEAR LAKE, CA 92315
0452-011-25	31450 SQUAW BUSH RD	LUCERNE VALLEY, CA 92356	22877 MIRIAM WAY	GRAND TERRACE, CA 92313
0452-011-26			1117 E ARLINGTON ST	COMPTON, CA 90221
0452-011-27			26444 COMMUNITY BLVD	BARSTOW, CA 92311
0453-041-06	16881 BARSTOW RD	LUCERNE VALLEY, CA 92356	1425 W 139TH ST	GARDENA, CA 90249
0453-041-07			22007 HURONS AVE	APPLE VALLEY, CA 92307
0453-041-10			PO BOX 10761	SAN BERNARDINO, CA 92423
0453-051-04			315 AVON CT	DUBLIN, OH 43017
0453-051-05			PO BOX 3309	HESPERIA, CA 92345
0453-051-07	BARSTOW RD	LUCERNE VALLEY, CA 92356	10843 ROSE PL	ADELANTO, CA 92301
0453-051-09			18 FAIR ELMS	LAGUNA NIGUEL, CA 92677
0453-051-10			19002 GLEDHILL ST	NORTHRIDGE, CA 91324
0453-071-04	33898 MEDICI	LUCERNE VALLEY, CA 92356	PO BOX 2198	LUCERNE VALLEY, CA 92356
0453-071-07	16401 HUFF RD	LUCERNE VALLEY, CA 92356	727 S ARDMORE AVE APT 1006	LOS ANGELES, CA 90005
0453-071-15	16400 HUFF RD	LUCERNE VALLEY, CA 92356	PO BOX 455	LUCERNE VALLEY, CA 92356
0453-071-20			PO BOX 682	LUCERNE VALLEY, CA 92356
0453-071-31			1190 MYRTLE DR	SAN BERNARDINO, CA 92410
0453-071-33	33879 TAPADERO RD	LUCERNE VALLEY, CA 92356	25337 RENOIT AVE	MORENO VALLEY, CA 92553
0453-071-34	TAPADERO RD	LUCERNE VALLEY, CA 92356	970 W LAUREL ST	COLTON, CA 92324
0453-071-35			PO BOX 1144	VICTORVILLE, CA 92393
0453-071-50			6971 LURLINE AVE	CANOGA PARK, CA 91306
0453-071-51			20162 HWY 18 STE G	APPLE VALLEY, CA 92307
0453-081-07			425 DEBORAH DR	POMONA, CA 91767
0453-081-08			425 DEBORAH DR	POMONA, CA 91767

0453-081-15			20821 HORACE ST	CHATSWORTH, CA 91311
0453-081-16			10448 DES MOINES AVE	NORTHRIDGE, CA 91326
0453-091-03	16274 MERIDIAN RD	LUCERNE VALLEY, CA 92356	16274 MERIDIAN RD	LUCERNE VALLEY, CA 92356
0453-091-05	33522 HAYNES RD	LUCERNE VALLEY, CA 92356	24455 MARIE ST	PERRIS, CA 92570
0453-091-06	33520 HAYNES RD	LUCERNE VALLEY, CA 92356	9919 TOPAZ AVE APT 11	HESPERIA, CA 92345
0453-091-07	33354 HAYNES RD	LUCERNE VALLEY, CA 92356	8757 LAUREL CANYON BLVD	SUN VALLEY, CA 91352
0453-091-09			23607 CASSEL FALL RIVER RD	FALL RIVER MILLS, CA 96028
0453-091-11	FERN RD	LUCERNE VALLEY, CA 92356	PO BOX 9618	NORTH HOLLYWOOD, CA 91609
0453-091-40	33261 HAYNES RD	LUCERNE VALLEY, CA 92356	15462 BELLFLOWER ST	ADELANTO, CA 92301
0453-091-48			2006 OLD HIGHWAY 395	FALLBROOK, CA 92028
0453-091-50			PO BOX 5394	FARGO, ND 58105
0453-091-52			PO BOX 1799	LUCERNE VALLEY, CA 92356
0453-091-61			PO BOX 682	LUCERNE VALLEY, CA 92356
0453-091-62	16646 MERIDIAN RD	LUCERNE VALLEY, CA 92356	PO BOX 682	LUCERNE VALLEY, CA 92356
0453-091-73	HAYNES RD	LUCERNE VALLEY, CA 92356	10843 ROSE PL	ADELANTO, CA 92301
0453-091-74			1064 FUNQUEST DR	FALLBROOK, CA 92028
0453-161-07	POWERLINE RD	LUCERNE VALLEY, CA 92356	321 CAMILLO RD	SIERRA MADRE, CA 91024
0453-161-08			3734 ELIZABETH ST STE A	RIVERSIDE, CA 92506
0453-191-03	16544 REMUDA RD	LUCERNE VALLEY, CA 92356	19670 TONKAWAN RD	APPLE VALLEY, CA 92307
0453-192-03			PO BOX 517	UPLAND, CA 91785
0453-192-04	TAPADERO RD	LUCERNE VALLEY, CA 92356	1548 E 75TH ST	LOS ANGELES, CA 90001
0453-192-05	16553 REMUDA RD	LUCERNE VALLEY, CA 92356	3765 ELK LN	GRANTS PASS, OR 97527
0453-193-01			PMB 5273 801 E 4TH ST # 2	GILLETTE, WY 82716
0453-193-02			21421 HWY 18	APPLE VALLEY, CA 92307
0453-193-06			2840 W ACADEMY AVE	ANAHEIM, CA 92804
0453-193-07			1548 E 77TH PL	LOS ANGELES, CA 90001
0453-193-11	TAPADERO RD	LUCERNE VALLEY, CA 92356	2234 CENTRAL AVE	SPRING VALLEY, CA 91977
0453-193-12			1967 CHEREMOYA AVE	LOS ANGELES, CA 90068
0464-071-27			PO BOX 7249	NEWPORT BEACH, CA 92658
0464-111-28	29611 EXETER ST	LUCERNE VALLEY, CA 92356	29611 EXETER ST	LUCERNE VALLEY, CA 92356
0464-122-01			14130 SAINT MARYS LN	HOUSTON, TX 77079
0464-122-12			522 W RIVERSIDE AVE	SPOKANE, WA 99201
0464-132-08	13230 HARDER RD	LUCERNE VALLEY, CA 92356	PO BOX 460	LUCERNE VALLEY, CA 92356
0464-132-09			22251 SIOUX RD	APPLE VALLEY, CA 92308

0464-132-10			7281 SVL BOX	SPRING VALLEY LAKE, CA 92395
0464-132-11			1560 N HELEN CT	ONTARIO, CA 91762
0464-132-12			735 E CARSON ST APT 1	LONG BEACH, CA 90807
0464-132-13	13178 HARDER RD	LUCERNE VALLEY, CA 92356	10248 NORTHRIDGE DR	RANCHO CUCAMONGA, CA 91737
0464-132-14			541 TWIN CREEKS WAY	SAN LUIS OBISPO, CA 93401
0464-132-15			541 TWIN CREEKS WAY	SAN LUIS OBISPO, CA 93401
0464-132-28			7215 E ARROYO HONDO RD	SCOTTSDALE, AZ 85266
0464-132-29	COVE RD	LUCERNE VALLEY, CA 92356	2165 S 7TH AVE	YUMA, AZ 85364
0464-132-33			12144 AEGEAN ST	NORWALK, CA 90650
0464-132-34			26 SUNSET KEY DR	KEY WEST, FL 33040
0464-132-36			PO BOX 163116	FORT WORTH, TX 76161
0464-132-41	13076 WAVERLY AVE	LUCERNE VALLEY, CA 92356	PO BOX 535	LUCERNE VALLEY, CA 92356
0464-132-43	WACHOOTA RD	LUCERNE VALLEY, CA 92356	522 W RIVERSIDE AVE	SPOKANE, WA 99201
0464-132-45	30372 COVE RD	LUCERNE VALLEY, CA 92356	30372 COVE RD	LUCERNE VALLEY, CA 92356
0464-132-46	30426 COVE RD	LUCERNE VALLEY, CA 92356	30426 COVE RD	LUCERNE VALLEY, CA 92356
0464-141-04			13600 SUNDOWNER LN	LUCERNE VALLEY, CA 92356
0464-141-06			20894 SW MCCORMICK HILL RD	HILLSBORO, OR 97123
0464-141-10			24921 MUIRLANDS BLVD SPC 291	LAKE FOREST, CA 92630
0464-141-15	COVE RD	LUCERNE VALLEY, CA 92356	13651 BARNETT WAY	GARDEN GROVE, CA 92843
0464-141-19			33939 ROAD 224	NORTH FORK, CA 93643
0464-141-20			33939 ROAD 224	NORTH FORK, CA 93643
0464-141-27	29912 EXETER ST	LUCERNE VALLEY, CA 92356	29912 EXETER ST	LUCERNE VALLEY, CA 92356
0464-141-31			13600 SUNDOWNER LN	LUCERNE VALLEY, CA 92356
0464-141-32			601 PAMLAR AVE	SAN JOSE, CA 95128
0464-151-01			29611 EXETER ST	LUCERNE VALLEY, CA 92356
0464-151-06	12450 SUSSEX AVE	LUCERNE VALLEY, CA 92356	18557 VILLA CLARA ST	ROWLAND HEIGHTS, CA 91748
0464-151-08			3902 VISTA CAMPANA N	OCEANSIDE, CA 92057
0464-161-01	30125 EXETER ST	LUCERNE VALLEY, CA 92356	30125 EXETER ST	LUCERNE VALLEY, CA 92356
0464-161-02			406 VIRGINIA DR	SAN JACINTO, CA 92583
0464-161-03			5822 OHIO ST	YORBA LINDA, CA 92886
0464-161-04	30275 EXETER ST	LUCERNE VALLEY, CA 92356	23301 RIDGE ROUTE DR SPC 139	LAGUNA HILLS, CA 92653
0464-161-05	EXETER ST	LUCERNE VALLEY, CA 92356	535 S LAURINDA LN	ORANGE, CA 92869
0464-191-01			18183 BEAR VALLEY RD	HESPERIA, CA 92345
0464-191-02			36430 TANSY CT	LAKE ELSINORE, CA 92532

0464-191-06	BANTA RD	LUCERNE VALLEY, CA 92356	4000 MACARTHUR BLVD STE 600	NEWPORT BEACH, CA 92660
0464-191-07	VENADA TRL	LUCERNE VALLEY, CA 92356	PO BOX 275	LUCERNE VALLEY, CA 92356
0464-191-18			2107 WATERSIDE CIR	WESTLAKE VILLAGE, CA 91362
0464-191-22	13150 VENADA RD	LUCERNE VALLEY, CA 92356	PO BOX 1376	LUCERNE VALLEY, CA 92356
0464-191-23	VENADA TRL	LUCERNE VALLEY, CA 92356	9121 ATLANTA AVE # 325	HUNTINGTON BEACH, CA 92646
0464-191-24			10487 11TH AVE	HESPERIA, CA 92345
0464-191-26	13221 POWERLINE RD	LUCERNE VALLEY, CA 92356	PO BOX 1575	LUCERNE VALLEY, CA 92356
0464-191-27	13232 VENADA RD	LUCERNE VALLEY, CA 92356	PO BOX 285	LUCERNE VALLEY, CA 92356
0464-191-28			946 W F ST	ONTARIO, CA 91762
0464-191-33			848 N RAINBOW BLVD # 2614	LAS VEGAS, NV 89107
0464-191-38	WAVERLY AVE	LUCERNE VALLEY, CA 92356	696 W 10TH ST	POMONA, CA 91766
0464-201-05			1949 W 102ND AVE	THORNTON, CO 80260
0464-201-06	BANTA RD	LUCERNE VALLEY, CA 92356	3275 RICHVIEW DR	HACIENDA HEIGHTS, CA 91745
0464-201-20			52 FOX RUN	CENTERVILLE, MA 02632
0464-201-21	13978 BANTA RD	LUCERNE VALLEY, CA 92356	PO BOX 2101	LUCERNE VALLEY, CA 92356
0464-201-22			26425 WREN ST	APPLE VALLEY, CA 92308
0464-201-23	CHUCKAWALLA RD	LUCERNE VALLEY, CA 92356	522 W RIVERSIDE AVE	SPOKANE, WA 99201
0464-201-24			18183 BEAR VALLEY RD	HESPERIA, CA 92345
0464-201-25	BANTA RD	LUCERNE VALLEY, CA 92356	36430 TANSY CT	LAKE ELSINORE, CA 92532
0464-201-32			PO BOX 2842	RIVERSIDE, CA 92516
0464-201-37	CHUCKAWALLA RD	LUCERNE VALLEY, CA 92356	522 W RIVERSIDE AVE	SPOKANE, WA 99201
0464-201-39	VENADA RD	LUCERNE VALLEY, CA 92356	18317 HAWTHORNE AVE	BLOOMINGTON, CA 92316
0464-201-40	VENADA RD	LUCERNE VALLEY, CA 92356	522 W RIVERSIDE AVE	SPOKANE, WA 99201
0464-211-11			1551 MOON VALLEY LN	CINCINNATI, OH 45230
0464-211-12			7737 E BRIGADE DR	KINGMAN, AZ 86401
0464-211-13	BANTA RD	LUCERNE VALLEY, CA 92356	4662 AMBERWOOD AVE	LA PALMA, CA 90623
0464-221-03	31212 SQUAW BUSH RD	LUCERNE VALLEY, CA 92356	PO BOX 1419	LUCERNE VALLEY, CA 92356
0515-011-14			3190 COTTONWOOD AVE	SAN JACINTO, CA 92582
0515-011-15			3190 COTTONWOOD AVE	SAN JACINTO, CA 92582
0515-011-22			2301 LOU MENK DR GOB-3W	FORT WORTH, TX 76131
0516-341-14	35100 SANTA FE ST	DAGGETT, CA 92327	PO BOX 2576	BOISE, ID 83701
0516-341-17			2301 LOU MENK DR GOB-3W	FORT WORTH, TX 76131
0529-241-18			469 OLD TRENTON RD	EAST WINDSOR, NJ 08512
0529-251-01			5210 E WILLIAMS CIR STE 700	TUCSON, AZ 85711

0529-251-04			5210 E WILLIAMS CIR STE 700	TUCSON, AZ 85711
0543-181-19			2317 CARWILE DR	ALHAMBRA, CA 91803
0543-181-20			225 PALMETTO DR APT 10	ALHAMBRA, CA 91801
0543-181-21			720 BARTOLO AVE	MONTEBELLO, CA 90640
0543-181-22			720 BARTOLO AVE	MONTEBELLO, CA 90640
0551-271-06	NATIONAL TRAILS HWY	LUDLOW, CA 92338	HC 1 BOX 6	LUDLOW, CA 92338
0551-271-10	NATIONAL TRAILS HWY	LUDLOW, CA 92338	HC 1 BOX 6	LUDLOW, CA 92338
0551-271-11	INTERSTATE4 OFFRAMP	LUDLOW, CA 92338	HC 1 BOX 6	LUDLOW, CA 92338
0551-271-12	INTERSTATE4 OFFRAMP	LUDLOW, CA 92338	HC 1 BOX 6	LUDLOW, CA 92338
0551-281-09			HC 1 BOX 6	LUDLOW, CA 92338
0551-281-12			25635 CRUCERO RD	LUDLOW, CA 92338
0551-281-13	25635 CRUCERO RD	LUDLOW, CA 92338	HC 1 BOX 6	LUDLOW, CA 92338
0551-281-14			PO BOX HC1	LUDLOW, CA 92338
0551-281-15	25632 CRUCERO RD	LUDLOW, CA 92338	HC 1 BOX 6	LUDLOW, CA 92338
0551-281-16			BOX HCI BOX 6	LUDLOW, CA 92338
0552-021-04			2301 LOU MENK DR GOB-3W	FORT WORTH, TX 76131
0552-021-39			2301 LOU MENK DR GOB-3W	FORT WORTH, TX 76131
0552-031-22			PO BOX 214	REDGRANITE, WI 54970
0552-031-23			151 ROLPH ST	SAN FRANCISCO, CA 94112
0552-031-24			PO BOX 2615	SANDPOINT, ID 83864
0552-031-26			211 ROSS WAY	SAN BRUNO, CA 94066
0552-031-27			PO BOX 6548	BURBANK, CA 91510
0552-031-41			3024 TREESDALE DR	LAS VEGAS, NV 89134
0552-031-42			3024 TREESDALE DR	LAS VEGAS, NV 89134
0552-131-10			PO BOX 3406	BOULDER, CO 80307
0552-131-15			PO BOX 3406	BOULDER, CO 80307
0552-131-16			PO BOX 3406	BOULDER, CO 80307
0552-141-04			8960 OAK GROVE AVE	SEBASTOPOL, CA 95472
0552-141-06			1005 EMERALD BAY	LAGUNA BEACH, CA 92651
0552-141-07			7848 DANCY RD	SAN DIEGO, CA 92126
0552-141-10			516 BRADFORD PARK LN	LOGANVILLE, GA 30052
0552-141-11			14819 SHERMAN WAY UNIT 14	VAN NUYS, CA 91405
0553-161-17			1400 DOUGLAS ST. STOP 1690	OMAHA, NE 68179
0553-161-19			1400 DOUGLAS ST. STOP 1690	OMAHA, NE 68179

0563-031-21			P.O. BOX 3150	SAN DIMAS, CA 91773
0563-031-22			P.O. BOX 3150	SAN DIMAS, CA 91773
0656-181-13	GOFFS RD	GOFFS, CA 92332	3100 ELKHORN BLVD	NORTH HIGHLANDS, CA 95660
0656-181-14	119246 GOFFS RD	ESSEX, CA 92332	3100 ELKHORN BLVD	NORTH HIGHLANDS, CA 95660
0656-181-20			1122 S CAPITAL OF TEXAS HWY	WEST LAKE HILLS, TX 78746
0656-181-21	119001 HAPPINESS RD	ESSEX, CA 92332	119001 HAPPINESS RD	ESSEX, CA 92332
0656-181-21	119001 HAPPINESS RD	ESSEX, CA 92332	119001 HAPPINESS RD	ESSEX, CA 92332
0656-191-03			157 W 5TH ST # 2ND	SAN BERNARDINO, CA 92415
0656-191-05			19780 E JEFFERSON AVE	REEDLEY, CA 93654
0656-191-06			1921 CORTEZ ST	NEEDLES, CA 92363
0656-191-07			2015 FLORA VIS	NEEDLES, CA 92363
0656-191-10			2301 LOU MENK DR GOB-3W	FORT WORTH, TX 76131
0656-191-15			19780 E JEFFERSON AVE	REEDLEY, CA 93654
0656-191-17			37198 LANFAIR RD G-15	ESSEX, CA 92332
0656-191-18			37198 LANFAIR RD G-15	ESSEX, CA 92332
0656-201-12			LYNCHET HOUSE ASHMORE SA WILTHSHIRE	<u> </u>
0656-201-13	119392 GOFFS RD	ESSEX, CA 92332	49804 EDISON LN	MORONGO VALLEY, CA 92256
0656-201-15			2301 LOU MENK DR GOB-3W	FORT WORTH, TX 76131
0658-131-02			550 S HOPE ST STE 2850	LOS ANGELES, CA 90071
214-00-001-006			PO BOX 61350	BOULDER CITY, NV 89006
214-00-001-011			PO BOX 61350	BOULDER CITY, NV 89006
214-00-001-019			PO BOX 61350	BOULDER CITY, NV 89006
214-00-001-021			PO BOX 61350	BOULDER CITY, NV 89006
214-00-001-028			488 8TH AVE # HQ08N1	SAN DIEGO, CA 92101
214-00-002-004			PO BOX 61350	BOULDER CITY, NV 89006
214-00-002-005			PO BOX 61350	BOULDER CITY, NV 89006
214-00-002-010			PO BOX 61350	BOULDER CITY, NV 89006
214-00-002-015			PO BOX 61350	BOULDER CITY, NV 89006
214-00-002-016			PO BOX 61350	BOULDER CITY, NV 89006
226-00-001-017			PO BOX 61350	BOULDER CITY, NV 89006
243-21-000-003	1900 STATE HWY 164	SEARCHLIGHT, NV 89046	1166 AVENUE OF THE AMERICAS # 9TH	NEW YORK, NY 10036
243-22-301-005			1166 AVENUE OF THE AMERICAS # 9TH	NEW YORK, NY 10036
243-27-101-004			1166 AVENUE OF THE AMERICAS # 9TH	NEW YORK, NY 10036
243-28-501-001			1166 AVENUE OF THE AMERICAS # 9TH	NEW YORK, NY 10036

264-15-401-001	1510 BRUCE WOODBURY DR	LAUGHLIN, NV 89029	PO BOX 30648	LAUGHLIN, NV 89028
264-15-401-002			PO BOX 61919	BOULDER CITY, NV 89006
264-15-401-004			PMB 500 1650 CASINO DR	LAS VEGAS, NV 89029
264-16-000-004			PMB 500 1650 CASINO DR	LAUGHLIN, NV 89029
264-16-000-005			PMB 500 1650 CASINO DR	LAUGHLIN, NV 89029
264-16-000-006			PMB 500 1650 CASINO DR	LAUGHLIN, NV 89029
264-17-000-005			759 CHIEF JUSTICE CUSHING HWY # 375	COHASSET, MA 02025
264-17-000-006			759 CHIEF JUSTICE CUSHING HWY # 375	COHASSET, MA 02025
264-17-000-008			9116 TAPANI ST	LAS VEGAS, NV 89123
264-17-000-009			203 AVENIDA ROSA	SAN CLEMENTE, CA 92672
264-17-000-010			6211 WILDCAT BROOK CT	NORTH LAS VEGAS, NV 89081
264-17-000-011			9312 RED TWIG DR	LAS VEGAS, NV 89134
264-17-000-013			PO BOX 29999	LAUGHLIN, NV 89028
264-17-000-014			4207 E PALO VERDE DR	PHOENIX, AZ 85018
264-17-000-015			PO BOX 29999	LAUGHLIN, NV 89028
264-17-000-016			4207 E PALO VERDE DR	PHOENIX, AZ 85018
264-17-000-017			4207 E PALO VERDE DR	PHOENIX, AZ 85018
264-17-000-018			4207 E PALO VERDE DR	PHOENIX, AZ 85018
264-17-000-019			4207 E PALO VERDE DR	PHOENIX, AZ 85018
264-17-000-020			4207 E PALO VERDE DR	PHOENIX, AZ 85018
264-17-000-021			1849 NOTTINGHAM LN	SAN DIMAS, CA 91773
264-20-000-002			2244 WALNUT GROVE AVE	ROSEMEAD, CA 91770
264-20-000-003			2244 WALNUT GROVE AVE	ROSEMEAD, CA 91770
264-21-101-004			2244 WALNUT GROVE AVE	ROSEMEAD, CA 91770
264-21-101-005			PO BOX 800	ROSEMEAD, CA 91770
264-21-101-006			2244 WALNUT GROVE AVE	ROSEMEAD, CA 91770
264-21-102-001			696 MATTHEW WAY	ARROYO GRANDE, CA 93420
264-21-102-003	2455 NEEDLES HWY	LAUGHLIN, NV 89029	696 MATTHEW WAY	ARROYO GRANDE, CA 93420
264-21-110-038	2345 BROOKINGS HARBOR DR	LAUGHLIN, NV 89029	1081 WHITNEY RANCH DR # 141	HENDERSON, NV 89014
264-21-110-039	2335 BROOKINGS HARBOR DR	LAUGHLIN, NV 89029	1081 WHITNEY RANCH DR # 141	HENDERSON, NV 89014
264-21-110-040	2325 BROOKINGS HARBOR DR	LAUGHLIN, NV 89029	1081 WHITNEY RANCH DR # 141	HENDERSON, NV 89014
264-21-110-041	2315 BROOKINGS HARBOR DR	LAUGHLIN, NV 89029	1081 WHITNEY RANCH DR # 141	HENDERSON, NV 89014
264-21-110-042	2305 BROOKINGS HARBOR DR	LAUGHLIN, NV 89029	1081 WHITNEY RANCH DR # 141	HENDERSON, NV 89014
264-21-110-043	2306 BROOKINGS HARBOR DR	LAUGHLIN, NV 89029	1081 WHITNEY RANCH DR # 141	HENDERSON, NV 89014

264-21-110-044	2316 BROOKINGS HARBOR DR	LA
264-21-110-045	2326 BROOKINGS HARBOR DR	LA
264-21-110-046	2336 BROOKINGS HARBOR DR	LA
264-21-110-047	2346 BROOKINGS HARBOR DR	LA
264-21-110-048	2356 BROOKINGS HARBOR DR	LA
264-21-110-049	2366 BROOKINGS HARBOR DR	LA
264-21-110-050	2376 BROOKINGS HARBOR DR	LA
264-21-110-051	2386 BROOKINGS HARBOR DR	LA
264-21-110-052	2385 BROOKINGS HARBOR DR	LA
264-21-110-053	2375 BROOKINGS HARBOR DR	LA
264-21-110-054	2365 BROOKINGS HARBOR DR	LA
264-21-110-055	2364 RADIANCE RIVER CT	LA
264-21-110-056	2374 RADIANCE RIVER CT	LA
264-21-110-057	2384 RADIANCE RIVER CT	LA
264-21-110-058	2383 RADIANCE RIVER CT	LA
264-21-110-059	2373 RADIANCE RIVER CT	LA
264-21-110-060	2363 RADIANCE RIVER CT	LA
264-21-110-061	2366 BROOKFIELD BAY AVE	LA
264-21-110-062	2376 BROOKFIELD BAY AVE	LA
264-21-110-063	2386 BROOKFIELD BAY AVE	LA
264-21-110-064	2387 BROOKFIELD BAY AVE	LA
264-21-110-065	2377 BROOKFIELD BAY AVE	LA
264-21-110-074		
264-21-110-075		
264-21-111-020	2247 BROOKINGS HARBOR DR	LA
264-21-111-021	2257 BROOKINGS HARBOR DR	LA
264-21-111-022	2267 BROOKINGS HARBOR DR	LA
264-21-111-044	2285 BROOKINGS HARBOR DR	LA
264-21-111-045	2295 BROOKINGS HARBOR DR	LA
264-21-111-046	2296 BROOKINGS HARBOR DR	LA
264-21-111-047	2286 BROOKINGS HARBOR DR	LA
264-21-111-048	2276 BROOKINGS HARBOR DR	LA
264-21-111-049	2266 BROOKINGS HARBOR DR	LA
264-21-111-050	2256 BROOKINGS HARBOR DR	LA

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HENDERSON, NV 89014 LAUGHLIN, NV 89029 HENDERSON, NV 89014 LAUGHLIN, NV 89029 LAUGHLIN, NV 89029 LAUGHLIN, NV 89029 LAUGHLIN, NV 89029 **BURNEY, CA 96013** RIVERSIDE, CA 92504 HENDERSON, NV 89014 LAUGHLIN, NV 89029 FLORHAM PARK, NJ 07932 FLORHAM PARK, NJ 07932 HACIENDA HEIGHTS, CA 91745 LAUGHLIN, NV 89029 LAUGHLIN, NV 89029 LAUGHLIN, NV 89029 LAUGHLIN, NV 89029 CERRITOS, CA 90703 LAUGHLIN, NV 89029 LAUGHLIN, NV 89029 ALTA LOMA, CA 91737 LAUGHLIN, NV 89029

264-21-111-051	2246 BROOKINGS HARBOR DR	LAUGHLIN, NV 89029
264-21-111-052	2236 BROOKINGS HARBOR DR	LAUGHLIN, NV 89029
264-21-111-053	2460 MORROW RIDGE PL	LAUGHLIN, NV 89029
264-21-111-054	2468 MORROW RIDGE PL	LAUGHLIN, NV 89029
264-21-111-055	2476 MORROW RIDGE PL	LAUGHLIN, NV 89029
264-21-501-002	1975 ARIE DR	LAUGHLIN, NV 89029
264-22-000-001	655 BRUCE WOODBURY DR	LAUGHLIN, NV 89029
264-22-000-002		
264-23-000-001	655 BRUCE WOODBURY DR	LAUGHLIN, NV 89029
264-23-000-002	655 BRUCE WOODBURY DR	LAUGHLIN, NV 89029
0397-023-01		
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2246 BROOKINGS HARBOR DR 2236 BROOKINGS HARBOR DR 2460 MORROW RIDGE PL 2468 MORROW RIDGE PL 2476 MORROW RIDGE PL 2244 WALNUT GROVE AVE 22835 CALLE SAN JUAN DE LOS LAGOS 22835 CALLE SAN JUAN DE LOS LAGOS

LAUGHLIN, NV 89029 ROSEMEAD, CA 91770 MORENO VALLEY, CA 92553 MORENO VALLEY, CA 92553

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22835 CALLE SAN JUAN DE LOS LAGOS 22835 CALLE SAN JUAN DE LOS LAGOS

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263-00-002-007	 	P.O. BOX 61470	BOULDER CITY, NV 89006-1470
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264-30-000-001	 	P.O. BOX 61470	BOULDER CITY, NV 89006-1470
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0552-031-32		
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2 INNOVATION WAY 2ND FLOOR, ATTN: STEF POMONA, CA 91768 6221 BOX SPRINGS BLVD RIVERSIDE, CA 92507

# Eldorado-Lugo-Mohave Series Capacitor Project- 300 Foot Notification List

0527-071-05	 	6221 BOX SPRINGS BLVD	RIVERSIDE, CA 92507
0527-071-14	 	6221 BOX SPRINGS BLVD	RIVERSIDE, CA 92507
0527-071-16	 	6221 BOX SPRINGS BLVD	RIVERSIDE, CA 92507
0527-091-01	 	6221 BOX SPRINGS BLVD	RIVERSIDE, CA 92507
0527-111-15	 	6221 BOX SPRINGS BLVD	RIVERSIDE, CA 92507
0527-111-16	 	6221 BOX SPRINGS BLVD	RIVERSIDE, CA 92507
0527-121-03	 	6221 BOX SPRINGS BLVD	RIVERSIDE, CA 92507
0527-121-11	 	6221 BOX SPRINGS BLVD	RIVERSIDE, CA 92507
0527-121-12	 	6221 BOX SPRINGS BLVD	RIVERSIDE, CA 92507
0529-241-15	 	6221 BOX SPRINGS BLVD	RIVERSIDE, CA 92507

Eldorado-Lugo-Mohave Series Capacitor Project Interested Party List for Notice of Application						
Chuck Bell, President Lucerne Valley / Johnson Valley Dr. Brian Paulson						
Lucerne Valley Economic Development Association	Municipal Advisory Council Third District of San Bernardino	Town Manager Laughlin Town				
P. O. Box 193	County	101 Civic Way				
Lucerne Valley, CA 92356	C/O County Service Area 29 P.O. Box 459 Lucerne Valley, CA 92356	Laughlin, Nevada 89029				
Paula Deel						
Newberry Springs Chamber of						
Commerce						
PO Box 116						
Newberry Springs, CA 92365						

# **APPENDIX F**

# Field Management Plan

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# List of Terms

ACSR	Aluminum Conductor Steel Reinforced
	Ampere
amp CAISO	California Independent System Operator
CAISO	Circuit breaker
_	
CDHS	California Department of Health Services
CPCN	Certificate of Public Convenience and Necessity
CPUC	California Public Utilities Commission
ELF	Extremely Low Frequency
ELM	Eldorado-Lugo-Mohave Series Capacitor Project
EMF	Electric and Magnetic Fields
FMP	Field Management Plan
HVAC	Heating, ventilating, and air conditioning equipment
GO	General Order
IARC	International Agency for Research on Cancer
kV	kilovolt
LST	lattice steel tower
MEER	Mechanical Electrical Equipment Room
mG	milligauss
NIEHS	National Institute of Environmental Health Sciences
NRPB	National Radiation Protection Board
OPGW	Optical Ground Wire
PEA	Proponents Environmental Assessment
PVC	Polyvinyl chloride
RAPID	Research and Public Information Dissemination
RPS	California Renewables Portfolio Standard
ROW	Right-of-way
SAC	Stranded Aluminum Conductor
SCE	Southern California Edison
TSP	Tubular steel pole
WHO	World Health Organization
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# I. EXECUTIVE SUMMARY

This document is Southern California Edison Company's ("SCE") Field Management Plan ("FMP") for the proposed Eldorado-Lugo-Mohave ("ELM") Series Capacitor Project ("Proposed Project"). SCE proposes to construct the Proposed Project to increase the power flow through the existing Eldorado-Lugo, Eldorado-Mohave, and Lugo-Mohave 500 kilovolt (kV) transmission lines for the purpose of increasing the amount of power delivered from California's Ivanpah Valley, Nevada, and Arizona to the Los Angeles Basin. The Proposed Project is needed to meet the planned in-service date of June 2020 in an effort to meet the requirements as outlined and required by the California Renewables Portfolio Standard for SCE to serve at least 33 percent of its retail load with renewable energy by 2020.

The Proposed Project consists of the following major electrical components:

- Construct two new 500 kV mid-line series capacitors (i.e., the proposed Newberry Springs Series Capacitor and Ludlow Series Capacitor) and associated equipment
- Relocate, replace, or modify 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 potential overhead clearance discrepancies
- Perform minor grading at two discrepancy locations along the Lugo-Mohave 500 kV Transmission Line
- Install approximately 235 miles of optical ground wire (OPGW) (173 miles on the Lugo-Mohave 500 kV Transmission Line, approximately 59 miles on the Eldorado-Mohave 500 kV Transmission Line, and approximately 3 miles of underground telecommunications facilities in the vicinity of Mohave Substation)
- Modify the ground wire peak of existing suspension towers used as splice locations for the OPGW work; some of these towers would also require minor modifications to the steel in the tower body
- Perform modifications within the existing Eldorado Substation on the existing Lugo series capacitor and upgrade the terminal equipment on the Lugo 500 kV Transmission Line
- Perform modifications within the existing Lugo Substation on the existing Eldorado series capacitor and Mohave series capacitors, extend the 500 kV switchrack and install new terminating equipment for two positions; remove two existing 500 kV tubular steel poles (TSPs) within the substation and install two new TSPs within the substation on the Eldorado and Mohave 500 kV Transmission Lines

- Replace existing Lugo series capacitors on the Lugo-Mohave 500 kV Transmission Line, and install new terminal equipment. Install new terminal equipment on the Lugo 500 kV Transmission Lines at the existing Mohave Substation
- Install and modify additional distribution and telecommunications facilities at various locations to support the Proposed Project
- Install (3) Fiber Optic Repeater sites, (Barstow, Kelbaker and Lanfair) on the Lugo-Mohave 500 kV Transmission Line<sup>1</sup>

SCE provides this FMP in order to inform the public, the California Public Utilities Commission ("CPUC"), and other interested parties of its evaluation of "no-cost and low-cost" magnetic field reduction design options for this Project, and SCE's proposed plan to apply these design options to the Proposed Project. This FMP has been prepared in accordance with CPUC Decision No. 93-11-013 and Decision No. 06-01-042 relating to extremely low frequency ("ELF")<sup>2</sup> electric and magnetic fields ("EMF"). This FMP also provides background on the current status of scientific research related to possible health effects of EMF, and a description of the CPUC's EMF policy.

The "no-cost" magnetic field reduction design options that are incorporated into the design of the Project are mainly as follows:

- Install mid-line series capacitors in undeveloped areas
- Place substation series capacitors away from the substation property lines
- Utilize taller structure heights in areas with potential overhead discrepancies
- Relocate underbuild distribution circuits on 115 kV structures
- Increase conductor ground clearance

The "no-cost" magnetic field reduction design options that SCE considered for the Proposed Project are summarized in Table 1.

SCE's plan for applying the above "no-cost and low-cost" magnetic field reduction design options for the Project is consistent with CPUC's EMF policy and with the direction of leading national and international health agencies. Furthermore, the plan complies with SCE's EMF Design Guidelines<sup>3</sup>, and with applicable national and state safety standards for new electrical facilities.

<sup>&</sup>lt;sup>1</sup> Fiber optic sites are part of this project, but they were not analyzed for EMF reduction measures in this FMP because they are not a major source of EMF. Fiber optic sites are displayed in Figure 1 for reference purpose only.

 $<sup>\</sup>frac{2}{100}$  The extremely low frequency is defined as the frequency range from 3 Hz to 3,000 Hz.

<sup>&</sup>lt;u>3</u> <u>EMF Design Guidelines</u>, July 2006.

Table 1. Summary of "No-cost and Low-cost" Magnetic Field Reduction Design Options						
Area No.	Location <sup>4</sup>	Adjacent Land Use <sup>5</sup>	MF Reduction Design Options Considered	Estimated Cost to Adopt	Design Option(s) Adopted? (Yes/No)	Reason(s) if not adopted
Newberry Springs Mid-Line Series Capacitor	Eldorado-Lugo 500 kV Transmission Line near Pisgah 220 kV Substation	6	<ul> <li>Install mid-line series capacitors in undeveloped areas</li> <li>Place mid-line series capacitors away from the graded area property lines</li> </ul>	<ul> <li>No-Cost<sup>6</sup></li> <li>Low-Cost</li> </ul>	<ul><li>Yes</li><li>No</li></ul>	Capacitor site is located in undeveloped land
Ludlow Mid-Line Series Capacitor	Lugo-Mohave 500 kV Transmission Line near Pisgah 220 kV Substation	6	<ul> <li>Install mid-line series capacitors in undeveloped areas</li> <li>Place mid-line series capacitors away from the graded area property lines</li> </ul>	<ul><li>No-Cost</li><li>No-Cost</li></ul>	<ul><li>Yes</li><li>Yes</li></ul>	
Eldorado 500 kV Substation Series Capacitors Mohave 500 kV Substation Series Capacitors	Lugo 500 kV Substation	2,3,6	• Place series capacitors away from the substation property lines	• No-Cost	• Yes	
Lugo 500 kV Substation Series Capacitors	Eldorado 500 kV Substation	3,6	• Place series capacitors away from the substation property lines	• No-Cost	• Yes	

<sup>&</sup>lt;u>4</u>

This column shows the major cross streets, existing transmission lines, or substation name(s) as reference points. Land usage codes are as follows: 1) schools, licensed day-cares, and hospitals, 2) residential, 3) commercial/industrial, 4) recreational, 5) agricultural, and 6) <u>5</u> undeveloped land.

This option was included in the preliminary design and continues to be included in the design of the Proposed Project. <u>6</u>

Table 1. Summary of "No-cost and Low-cost" Magnetic Field Reduction Design Options (Cont.)						
Area No.	Location	Adjacent Land Use	MF Reduction Design Options Considered	Estimated Cost to Adopt	Design Option(s) Adopted? (Yes/No)	Reason(s) if not adopted
Lugo 500 kV Substation Series Capacitors	Mohave 500 kV Substation	3,6	• Place series capacitors away from the substation property lines	• No-Cost	• Yes	
Eldorado-Lugo 500 kV Transmission Line	Structures: M14-T4 <sup>7</sup> M33-T1 M63-T3 M64-T2 M97-T1 M97-T2	6	• Utilize taller structure heights in areas with potential overhead discrepancies	• No-Cost	• Yes	
	M58-T1 to M58-T2 M20-T2 to M20-T3 <sup>8</sup>		<ul> <li>Increase conductor ground clearance</li> <li>Relocate underbuild distribution circuits on 115 kV structures and reframe the 115 kV line</li> </ul>	<ul><li>No-Cost</li><li>No-Cost</li></ul>	<ul><li>Yes</li><li>Yes</li></ul>	
Lugo-Mohave 500 kV Transmission Line	Structures: M4-T2 to M4-T3 M29-T3 to M30-T1 M89-T1 to M89-T2 M22-T4 M68-T1	6	<ul> <li>Increase conductor ground clearance</li> <li>Utilize taller structure heights in areas with potential overhead discrepancies</li> </ul>	<ul><li>No-Cost</li><li>No-Cost</li></ul>	<ul><li>Yes</li><li>Yes</li></ul>	
	M20-T3 to M20-T4		• Relocate underbuild distribution circuits on 115 kV structures	• No-Cost	• Yes	

<sup>7</sup> 

Increase the structural height of this tower will correct two potential clearance discrepancies. Reframing 115 kV structures and relocating underbuild distribution circuits will correct two potential clearance discrepancies. 8

Eldorado-Mohave 500 kV Transmission Line	Structure: M4-T1	6	• Utilize taller structure heights in areas with potential overhead discrepancies	• No-Cost	• Yes		
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## II. BACKGROUND REGARDING EMF AND PUBLIC HEALTH RESEARCH ON EMF

There are many sources of power frequency<sup>9</sup> electric and magnetic fields, including internal household and building wiring, electrical appliances, and electric power transmission and distribution lines. There have been numerous scientific studies about the potential health effects of EMF. After many years of research, the scientific community has been unable to determine if exposures to EMF cause health hazards. State and federal public health regulatory agencies have determined that setting numeric exposure limits is not appropriate.<sup>10</sup>

Many of the questions about possible connections between EMF exposures and specific diseases have been successfully resolved due to an aggressive international research program. However, potentially important public health questions remain about whether there is a link between EMF exposures and certain diseases, including childhood leukemia and a variety of adult diseases (e.g., adult cancers and miscarriages). As a result, some health authorities have identified magnetic field exposures as a possible human carcinogen. As summarized in greater detail below, these conclusions are consistent with the following published reports: the National Institute of Environmental Health Sciences ("NIEHS") 1999<sup>11</sup>, the National Radiation Protection Board ("NRPB") 2001<sup>12</sup>, the International Commission on non-Ionizing Radiation Protection ("ICNIRP") 2001, the California Department of Health Services ("CDHS") 2002<sup>13</sup>, the International Agency for Research on Cancer ("IARC") 2002<sup>14</sup> and the World Health Organization ("WHO") 2007<sup>15</sup>.

The federal government conducted EMF research as a part of a \$45 million research program managed by the NIEHS. This program, known as the EMF RAPID (Research and Public Information Dissemination), submitted its final report to the U.S. Congress on June 15, 1999. The report concluded that:

• "The scientific evidence suggesting that ELF-EMF exposures pose any health risk is weak."<sup>16</sup>

<sup>9</sup> In U.S., it is 60 Hertz (Hz).

<sup>10</sup> CPUC Decision 06-01-042, p. 6, footnote 10.

<sup>11</sup> National Institute of Environmental Health Sciences' Report on Health Effects from Exposures to Power-Line frequency Electric and Magnetic Fields, NIH Publication No. 99-4493, June 1999.

<sup>12</sup> National Radiological Protection Board, <u>Electromagnetic Fields and the Risk of Cancer, Report of an Advisory</u> <u>Group on Non-ionizing Radiation</u>, Chilton, U.K. 2001.

<sup>13</sup> California Department of Health Services, <u>An Evaluation of the Possible Risks from Electric and Magnetic Fields from Power Lines, Internal Wiring, Electrical Occupations, and Appliances</u>, June 2002.

<sup>14</sup> World Health Organization / International Agency for Research on Cancer, IARC Monographs on the evaluation of carcinogenic risks to humans (2002), Non-ionizing radiation, Part 1: Static and extremely lowfrequency (ELF) electric and magnetic fields, IARCPress, Lyon, France: International Agency for Research on Cancer, Monograph, vol. 80, p. 338, 2002.

<sup>&</sup>lt;sup>15</sup> WHO, Environmental Health Criteria 238, <u>EXTREMELY LOW FREQUENCY FIELDS</u>, 2007.

<sup>16</sup> National Institute of Environmental Health Sciences, <u>NIEHS Report on Health Effects from Exposures to</u> <u>Power-Frequency Electric and Magnetic Fields</u>, p. ii, NIH Publication No. 99-4493, 1999.

- "The NIEHS concludes that ELF-EMF exposure cannot be recognized as entirely safe because of weak scientific evidence that exposure may pose a leukemia hazard."<sup>17</sup>
- "The NIEHS suggests that the level and strength of evidence supporting ELF-EMF exposure as a human health hazard are insufficient to warrant aggressive regulatory actions; thus, we do not recommend actions such as stringent standards on electric appliances and a national program to bury all transmission and distribution lines. Instead, the evidence suggests passive measures such as a continued emphasis on educating both the public and the regulated community on means aimed at reducing exposures. NIEHS suggests that the power industry continue its current practice of siting power lines to reduce exposures and continue to explore ways to reduce the creation of magnetic fields around transmission and distribution lines without creating new hazards."<sup>18</sup>

In 2001, Britain's NRPB arrived at a similar conclusion:

"After a wide-ranging and thorough review of scientific research, an independent Advisory Group to the Board of NRPB has concluded that the power frequency electromagnetic fields that exist in the vast majority of homes are not a cause of cancer in general. However, some epidemiological studies do indicate a possible small risk of childhood leukemia associated with exposures to unusually high levels of power frequency magnetic fields."<sup>19</sup>

In 2002, three scientists for CDHS concluded:

"To one degree or another, all three of the [CDHS] scientists are inclined to believe that EMFs can cause some degree of increased risk of childhood leukemia, adult brain cancer, Lou Gehrig's disease, and miscarriage.

They [CDHS] strongly believe that EMFs do not increase the risk of birth defects, or low birth weight.

They [CDHS] strongly believe that EMFs are not universal carcinogens, since there are a number of cancer types that are not associated with EMF exposure.

To one degree or another they [CDHS] are inclined to believe that EMFs do not cause an increased risk of breast cancer, heart disease, Alzheimer's disease, depression, or symptoms attributed by some to a sensitivity to EMFs. However, all three scientists had judgments that were "close to the dividing line between believing and not believing" that EMFs cause some degree of increased risk of suicide. For adult leukemia, two of the

<sup>&</sup>lt;u>17</u> *Ibid.*, p. iii.

<sup>&</sup>lt;u>18</u> *Ibid.*, p. 37 – 38.

<sup>19</sup> NRPB, <u>NRPB Advisory Group on Non-ionizing Radiation Power Frequency Electromagnetic Fields and the Risk of Cancer</u>, NRPB Press Release March 2001.

scientists are 'close to the dividing line between believing or not believing' and one was 'prone to believe' that EMFs cause some degree of increased risk."<sup>20</sup>

Also in 2002, the World Health Organization's ("WHO") IARC concluded:

"ELF magnetic fields are possibly carcinogenic to humans"<sup>21</sup>, based on consistent statistical associations of high-level residential magnetic fields with a doubling of risk of childhood leukemia...Children who are exposed to residential ELF magnetic fields less than 0.4 microTesla (4.0 milliGauss "mG") have no increased risk for leukemia.... In contrast, "no consistent relationship has been seen in studies of childhood brain tumors or cancers at other sites and residential ELF electric and magnetic fields."<sup>22</sup>

In June of 2007, the WHO issued a report on their multi-year investigation of EMF and the possible health effects. After reviewing scientific data from numerous EMF and human health studies, they concluded:

"Scientific evidence suggesting that everyday, chronic low-intensity (above 0.3-0.4  $\mu$ T [3-4 mG]) power-frequency magnetic field exposure poses a health risk is based on epidemiological studies demonstrating a consistent pattern of increased risk for childhood leukaemia."<sup>23</sup>

"In addition, virtually all of the laboratory evidence and the mechanistic evidence fail to support a relationship between low-level ELF magnetic fields and changes in biological function or disease status. Thus, on balance, the evidence is not strong enough to be considered causal, but sufficiently strong to remain a concern."<sup>24</sup>

"A number of other diseases have been investigated for possible association with ELF magnetic field exposure. These include cancers in both children and adults, depression, suicide, reproductive dysfunction, developmental disorders, immunological modifications and neurological disease. The scientific evidence supporting a linkage between ELF magnetic fields and any of these diseases is much weaker than for childhood leukemia and in some cases (for example, for cardiovascular disease or breast cancer) the evidence is sufficient to give confidence that magnetic fields do not cause the disease"<sup>25</sup>

"Furthermore, given both the weakness of the evidence for a link between exposure to ELF magnetic fields and childhood leukemia, and the limited impact on public health if there is a link, the benefits of exposure reduction on health are unclear. Thus, the costs of precautionary measures should be very low."<sup>26</sup>

<sup>20</sup> CDHS, An Evaluation of the Possible Risks From Electric and Magnetic Fields (EMFs) From Power Lines, Internal Wiring, Electrical Occupations and Appliances, p. 3, 2002.

<sup>21</sup> IARC, Monographs, Part I, Vol. 80, p. 338.

<sup>22</sup> *Ibid.*, p. 332 – 334.

<sup>&</sup>lt;sup>23</sup> WHO, Environmental Health Criteria 238, <u>EXTREMELY LOW FREQUENCY FIELDS</u>, p. 11 - 13, 2007.

<sup>&</sup>lt;u>24</u> *Ibid.*, p. 12.

<sup>25</sup> *Ibid.*, p. 12.

<sup>&</sup>lt;u>26</u> *Ibid.*, p. 13.

## III. APPLICATION OF THE CPUC'S "NO-COST AND LOW-COST" EMF POLICY TO THIS PROJECT

Recognizing the scientific uncertainty over the connection between EMF exposures and health effects, the CPUC adopted a policy that addresses public concern over EMF with a combination of education, information, and precaution-based approaches. Specifically, Decision 93-11-013 established a precautionary based "no-cost and low-cost" EMF policy for California's regulated electric utilities based on recognition that scientific research had not demonstrated that exposures to EMF cause health hazards and that it was inappropriate to set numeric standards that would limit exposure.

In 2006, the CPUC completed its review and update of its EMF Policy in Decision 06-01-042. This decision reaffirmed the finding that state and federal public health regulatory agencies have not established a direct link between exposure to EMF and human health effects,<sup>27</sup> and the policy direction that (1) use of numeric exposure limits was not appropriate in setting utility design guidelines to address EMF,<sup>28</sup> and (2) existing "no-cost and low-cost" precautionary-based EMF policy should be continued for proposed electrical facilities. The decision also reaffirmed that EMF concerns brought up during Certificate of Public Convenience and Necessity ("CPCN") and Permit to Construct ("PTC") proceedings for electric and transmission and substation facilities should be limited to the utility's compliance with the CPUC's "no-cost and low-cost" policies.<sup>29</sup>

The decision directed regulated utilities to hold a workshop to develop standard approaches for EMF Design Guidelines and such a workshop was held on February 21, 2006. Consistent design guidelines have been developed that describe the routine magnetic field reduction measures that regulated California electric utilities consider for new and upgraded transmission line and transmission substation projects. SCE filed its revised EMF Design Guidelines with the CPUC on July 26, 2006.

"No-cost and low-cost" measures to reduce magnetic fields would be implemented for this Project in accordance with SCE's EMF Design Guidelines. In summary, the process of evaluating "no-cost and low-cost" magnetic field reduction measures and prioritizing within and between land usage classes considers the following:

<sup>27</sup> CPUC Decision 06-01-042, Findings of Fact No. 5, mimeo. p. 19 ("As discussed in the rulemaking, a direct link between exposure to EMF and human health effects has yet to be proven despite numerous studies including a study ordered by this Commission and conducted by DHS.").

<sup>28</sup> CPUC Decision 06-01-042, mimeo. p. 17 - 18 ("Furthermore, we do not request that utilities include non-routine mitigation measures, or other mitigation measures that are based on numeric values of EMF exposure, in revised design guidelines or apply mitigation measures to reconfigurations or relocations of less than 2,000 feet, the distance under which exemptions apply under GO 131-D. Non-routine mitigation measures should only be considered under unique circumstances.").

<sup>29</sup> CPUC Decision 06-01-042, Conclusion of Law No. 2, mimeo. p. 21, ("EMF concerns in future CPCN and PTC proceedings for electric and transmission and substation facilities should be limited to the utility's compliance with the Commission's low-cost/no-cost policies.").

- 1. SCE's priority in the design of any electrical facility is public and employee safety. Without exception, design and construction of an electric power system must comply with all applicable federal, state, and local regulations, applicable safety codes, and each electric utility's construction standards. Furthermore, transmission and subtransmission lines and substations must be constructed so that they can operate reliably at their design capacity. Their design must be compatible with other facilities in the area and the cost to operate and maintain the facilities must be reasonable.
- 2. As a supplement to Step 1, SCE follows the CPUC's direction to undertake "nocost and low-cost" magnetic field reduction measures for new and upgraded electrical facilities. Any proposed "no-cost and low-cost" magnetic field measures, must, however, meet the requirements described in Step 1 above. The CPUC defines "no-cost and low-cost" measures as follows:
  - Low-cost measures, in aggregate, should:
    - Cost in the range of 4 percent of the total project cost.
    - Result in magnetic field reductions of "15% or greater at the utility R-O-W [right-of-way]..."<sup>30</sup>

The CPUC Decision stated,

"We direct the utilities to use 4 percent as a benchmark in developing their EMF mitigation guidelines. We will not establish 4 percent as an absolute cap at this time because we do not want to arbitrarily eliminate a potential measure that might be available but costs more than the 4 percent figure. Conversely, the utilities are encouraged to use effective measures that cost less than 4 percent."<sup>31</sup>

3. The CPUC provided further policy direction in Decision 06-01-042, stating that, "[a]lthough equal mitigation for an entire class is a desirable goal, we will not limit the spending of EMF mitigation to zero on the basis that not all class members can benefit."<sup>32</sup> While Decision 06-01-042 directs the utilities to favor schools, daycare facilities and hospitals over residential areas when applying low-cost magnetic field reduction measures, prioritization within a class can be difficult on a project case-by-case basis because schools, day-care facilities, and hospitals are often integrated into residential areas, and many licensed day-care facilities are housed in private homes, and can be easily moved from one location to another. Therefore, it may be practical for public schools, licensed day-care centers, hospitals, and residential land uses to be grouped together to receive highest prioritization for low-cost magnetic field reduction measures. Commercial and industrial areas may be grouped as a second priority group, followed by recreational and agricultural areas as the third group. Low-cost magnetic field reduction measures will not be considered for undeveloped land, such as open space, state and national parks, and

<sup>&</sup>lt;u>30</u> CPUC Decision 06-01-042, p. 10.

<sup>&</sup>lt;u>31</u> CPUC Decision 93-11-013, § 3.3.2, p.10.

<sup>32</sup> CPUC Decision 06-01-042, p. 10.

Bureau of Land Management and U.S. Forest Service lands. When spending for low-cost measures would otherwise disallow equitable magnetic field reduction for all areas within a single land-use class, prioritization can be achieved by considering location and/or density of permanently occupied structures on lands adjacent to the projects, as appropriate.

This FMP contains descriptions of various magnetic field models and the calculated results of magnetic field levels based on those models. These calculated results are provided only for purposes of identifying the relative differences in magnetic field levels among various transmission or subtransmission line design alternatives under a specific set of modeling assumptions and determining whether particular design alternatives can achieve magnetic field level reductions of 15 percent or more. The calculated results are not intended to be predictors of the actual magnetic field levels at any given time or at any specific location if and when the Project is constructed. This is because magnetic field levels depend upon a variety of variables, including load growth, customer electricity usage, and other factors beyond SCE's control. The CPUC affirmed this in D. 06-01-042 stating:

"Our [CPUC] review of the modeling methodology provided in the utility [EMF] design guidelines indicates that it accomplishes its purpose, which is to measure the relative differences between alternative mitigation measures. Thus, the modeling indicates relative differences in magnetic field reductions between different transmission line construction methods, but does not measure actual environmental magnetic fields."<sup>33</sup>

<sup>33</sup> CPUC Decision 06-01-042, p. 11.

# **IV. PROJECT DESCRIPTION**

This document is Southern California Edison Company's ("SCE") Field Management Plan ("FMP") for the proposed Eldorado-Lugo-Mohave ("ELM") Series Capacitor Project ("Proposed Project"). SCE proposes to construct the Proposed Project to increase the power flow through the existing Eldorado-Lugo, Eldorado-Mohave, and Lugo-Mohave 500 kilovolt (kV) transmission lines for the purpose of increasing the amount of power delivered from California's Ivanpah Valley, Nevada, and Arizona to the Los Angeles Basin (see Figure 1, Proposed Project Overview Map<sup>34</sup>). The Proposed Project is needed to meet the planned in-service date of June 2020 in an effort to meet the requirements as outlined and required by the California Renewables Portfolio Standard (RPS) for SCE to serve at least 33 percent of its retail load with renewable energy by 2020.<sup>35</sup>

For the purpose of EMF analysis, this FMP focuses only on major electrical components of the Proposed Project. Substation apparatus upgrade, distribution system modification, telecommunication, and construction details are not in the scope of this FMP.

This section provides a description of the Proposed Project. The Proposed Project would be located primarily within the existing ELM corridor in the incorporated areas of San Bernardino County, California and Clark County, Nevada, including City of Hesperia, California, the unincorporated community of Lucerne Valley in California, as well as the unincorporated communities of Searchlight and Laughlin in Nevada. The Proposed Project would cross primarily open space lands under the jurisdiction of the Bureau of Land Management, the National Park Service, the Bureau of Reclamation, and the Department of Defense, as well as land managed by the California State Lands Commission and the Nevada State Parks.

#### **Transmission Lines**

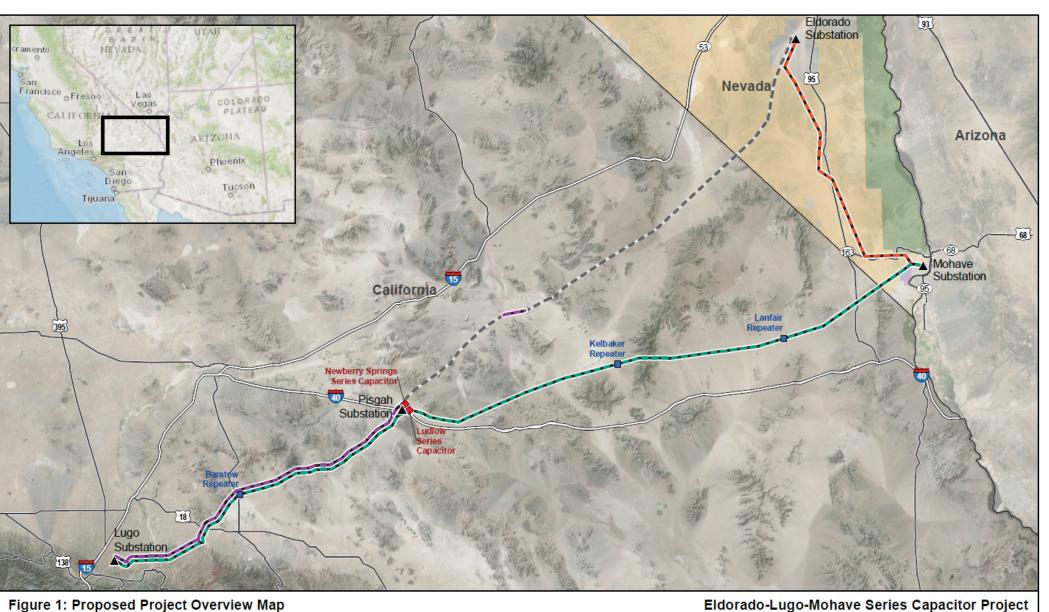
The Proposed Project would involve modifications and/or upgrades to the following existing 500 kV transmission lines:

- Eldorado-Lugo 500 kV Transmission Line
- Eldorado-Mohave 500 kV Transmission Line
- Lugo-Mohave 500 kV Transmission Line

 $<sup>\</sup>frac{34}{10}$  The colored dashed lines on Figure 1 indicate segments of 500 kV transmission lines where work is proposed.

<sup>35</sup> The California RPS requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020. The CPUC implements and administers RPS compliance rules for California's retail sellers of electricity. SCE's current renewable procurement status percentages can be found on the CPUC's website (http://www.cpuc.ca.gov/RPS\_Homepage/).

# Figure 1. Proposed Project Overview Map



#### Figure 1: Proposed Project Overview Map

- Existing Substation
- Proposed Mid-Line Capacitor Location
- Proposed Fiber Optic Repeater Location
- ----- Eldorado Lugo 500 kV Transmission Line
- Eldorado Mohave 500 kV Transmission Line
- Lugo Mohave 500 kV Transmission Line
- Transmission Line not part of Project

#### Land Administration

County Park

Bureau of Reclamation

Bureau of Land Management

Miles

50

# Other State Park

Military

Interstate National Park Service — State Highway/US Highway

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The Proposed Project includes raising nine existing 500 kV towers along the Eldorado-Lugo, Lugo-Mohave, and Eldorado-Mohave 500 kV Transmission Lines to address potential overhead clearance discrepancies. Approximately 59 existing 500 kV towers along the Eldorado-Mohave and Lugo-Mohave 500 kV Transmission Lines would be modified to facilitate the installation of optical ground wire. Approximately two tubular steel poles (TSPs) would be removed and two TSPs would be installed at Lugo Substation.

In order to address 16 potential overhead clearance discrepancies at approximately 14 locations on the Eldorado-Lugo, Eldorado-Mohave, and Lugo-Mohave 500 kV Transmission Lines, the following is proposed:

- Raise Tower M14-T4 on the Eldorado-Lugo 500 kV Transmission Line a minimum of 18.5 feet to address two discrepancies on either side of the tower
- Reframe and lower the structure on the Cottonwood-Savage 115 kV Subtransmission Line and lower the 12 kV distribution line between Towers M20-T2 and M20-T3 to address one discrepancy on the Eldorado-Lugo 500 kV Transmission Line and to address another discrepancy between Towers M20-T3 and M20-T4 on the Lugo-Mohave 500 kV Transmission Line by a minimum of 5 feet
- Raise Tower M33-T1 on the Eldorado-Lugo 500 kV Transmission Line by a minimum of 5 feet
- Modify conductor between Towers M58-T1 and M58-T2 on the Eldorado-Lugo 500 kV Transmission Line
- Raise Tower M63-T3 on the Eldorado-Lugo 500 kV Transmission Line by a minimum of 13.5 feet
- Raise Tower M64-T2 on the Eldorado-Lugo 500 kV Transmission Line by a minimum of 5 feet
- Raise Towers M97-T1 and M97-T2 on the Eldorado-Lugo 500 kV Transmission Line by a minimum of 18.5 feet
- Remove a minimum of 3.5 feet of concrete below conductor between Towers M4-T2 and M4-T3 on the Lugo-Mohave 500 kV Transmission Line
- Reframe and lower the distribution line between Towers M8-T1 and M8-T2 on the Lugo-Mohave 500 kV Transmission Line by a minimum of 5 feet
- Raise Tower M22-T4 on the Lugo-Mohave 500 kV Transmission Line by a minimum of 13.5 feet
- Grade/remove a minimum of 2 feet of berm between Towers M29-T3 and M30-T1 on the Lugo-Mohave 500 kV Transmission Line

- Raise Tower M68-T1 on the Lugo-Mohave 500 kV Transmission Line by a minimum of 8.5 feet
- Modify conductor between Towers M89-T1 and M89-T2 on the Lugo-Mohave 500 kV Transmission Line
- Raise Tower M4-T1 on the Eldorado-Mohave 500 kV Transmission Line by a minimum of 18.5 feet and add lattice steel tower (LST) and foundation modifications as required

The project description is based on planning level assumptions. Exact details would be determined following completion of final engineering, identification of field conditions, availability of labor, material, and equipment, and compliance with applicable environmental and permitting requirements.

# **Mid-Line Capacitors**

The Proposed Project includes the construction of two new 500 kV mid-line series capacitors the proposed Newberry Springs Series Capacitor and Ludlow Series Capacitor—within the Eldorado-Lugo and Lugo-Mohave 500 kV Transmission Line ROWs, respectively. Each midline series capacitor pad would be approximately 225 feet wide by 324 feet long, and would occupy approximately 1.8 acres within an approximately 3.3-acre graded site (Newberry Springs Series Capacitor) or 3.2-acre graded site (Ludlow Series Capacitor). Each mid-line series capacitor would include the following components:

- 500 kV capacitor bank with required platforms, support insulators, foundations, conduits or trenches, cables, conductors, and bus and/or cable interconnections
- Mechanical Electrical Equipment Room with alternating current/direct current panels; Control & Protection panels; batteries; batteries chargers; telecommunications racks; security racks; heating, ventilating, and air conditioning equipment (HVAC), communication room to house communication equipment, and emergency lighting
- Two transmission interface structures and bus supports<sup>36</sup>
- External site lighting system
- External bypass switch with required support insulators, foundations, conduits or trenches, conductors, conductors support insulators, and grounding connections
- Two motor-operated isolating disconnect switches with ground attachments, required support insulators, foundations, conduits or trenches, conductors, conductors support insulators, and grounding connections

 $<sup>\</sup>frac{36}{36}$  SCE is evaluating the use of transmission interface structures.

- Up to two new internal bypass switches with required foundations, conduits or trenches, cables, conductors, bus-work, and grounding connections
- Security cameras with support structures and foundations
- Conductor between the two transmission interface structures inside the series capacitor facilities with two-bundled 2,156 kcmil 84/19 stranded "BLUEBIRD" aluminum conductor steel reinforced (ACSR) per phase; insulator assemblies and mounting hardware (existing conductor may be used from existing towers to the new transmission interface structures)
- Insulator assemblies and mounting hardware on both sides of conductor spans
- Two overhead ground wires to connect existing and proposed towers at the proposed series capacitor facilities with 7 No. 6 Alumoweld wire
- Chain-link fence and gates around the series capacitor bank, and chain-link fence and gates with appropriate top guard (e.g., castle spikes, barbed wire, and/or razor wire) along the perimeter of the facility
- Propane emergency generator inside/outside mechanical electrical equipment room (MEER) structure and a 499-gallon propane fuel tank surrounded by a block wall on at least three sides
- Ground grid system
- Portable, permanent restroom on site

#### **Substations**

There are no new substations proposed as part of the Proposed Project. Modifications to existing substation equipment at Eldorado, Lugo, and Mohave substations would be performed to accommodate the upgrades to the transmission facilities.

Work at Eldorado, Lugo, and Mohave substations would occur on the Proposed Projectrelated 500 kV facilities and would include replacement and upgrade of series capacitors, disconnect switches, circuit breakers, foundations, and reconductoring line positions, as follows:

Modifications at the existing Eldorado Substation include the following:

- Upgrade the Lugo 500 kV position equipment to 4,000 amperes (amps):
  - Replace 3,000-amp circuit breakers with 4,000-amp circuit breakers
  - Replace 3,000-amp disconnect switches with 4,000-amp disconnect switches
- Remove the obsolete equipment for the series capacitor

- Upgrade existing 500 kV Lugo series capacitor bank to 3,300-amp including required conductors, buses, and/or cable interconnections
- Add motor-operating mechanisms to existing isolating disconnect switches
- Incorporate internal and external bypass switches, isolating disconnect switches, and ground switches into interlock logic, including conduits and terminating control and power wiring to terminal blocks in switches and Control & Protection panels in the series capacitor MEER
- Provide control and power, wiring, testing and commissioning to 500 kV external bypass switch and motor-operated isolating disconnect switches with ground attachments, including conduits from the Lugo series capacitor's MEER to interface with SCE conduits for these switches located within the substation
- Reconductor the line positions with new two-bundled 2,156 kcmil 84/19 stranded "BLUEBIRD" ACSR
- Remove power line carrier protection
- Install new protective relays with digital communication for line and series capacitor protection
- Install transient recovery voltage capacitors
- Install new foundations, steel structures, grounding, and conduits for the new equipment
- Replace all home-run cables from switchyard equipment to the existing MEER
- Install additional telecommunications equipment—including channel equipment, light wave equipment, and fiber tie cables between buildings and existing MEER where required—to provide two diverse communication paths

Modifications at the existing Lugo Substation include the following:

- Reconfigure two existing 500 kV positions:
  - Remove the Eldorado 500 kV Transmission Line from the dead end-connection at the switch rack; and retain all equipment for a breaker-and-a-half position
  - Remove the Mohave 500 kV Transmission Line from the dead end- connection at the switch rack; demolish the east circuit breaker and associated line disconnect switches; and configure switch rack for a double-bus, double-breaker position
- Relocate the Eldorado and Mohave 500 kV Transmission Lines to two new positions equipped for 4,000 amps with 4,000-amp circuit breakers and 4,000-amp vertical break disconnect switches

- Four overhead ground wires to connect the extended 500 kV switchracks to the TSPs with No. 6 Alumoweld wire
- Remove two existing 500 kV TSP structures and foundations to a depth of 3 feet and install two new 500 kV TSP structures to support the relocation of the Eldorado and Mohave 500 kV Transmission Lines to their new positions
- Extend the existing 500 kV switchrack by four positions
- Conductor the line positions with new two-bundled 2,156 kcmil 84/19 stranded "BLUEBIRD" ACSR per phase
- Install new foundations, steel structures, grounding, and conduits for the new equipment
- Remove power line carrier protection; install new protective relays with digital communication in the existing MEER for line and series capacitor protection
- Remove the obsolete equipment for the series capacitor
- Upgrade existing 500 kV Eldorado and Mohave series capacitor banks to 3,300-amp including required conductors, buses, and/or cable interconnections
- Update the substation database at the Regional Control Center Energy Management System
- Install a new Remote Terminal Unit (RTU) or add card to the existing RTU as required

Install additional telecommunications equipment—including channel equipment, light wave equipment, and fiber tie cables between buildings and existing MEER where required—to provide two diverse communication paths. Modifications at the existing Mohave Substation include the following:

- Equip two existing 500 kV positions:
  - One 4,000-amp Lugo 500 kV Transmission Line position equipment with 4,000-amp circuit breakers and 4,000-amp disconnect switches
  - One 3,000-amp Eldorado 500 kV Transmission Line position with 3,000-amp circuit breakers and 3,000-amp disconnect switches
- Reconductor the line position with new two-bundled 2,156 kcmil 84/19 stranded "BLUEBIRD" ACSR
- Remove and salvage the existing 500 kV operating bus disconnect switches at two line positions
- Remove power line carrier protection equipment for the existing Lugo 500 kV Transmission Line

- Install new protective relays with digital communication and series capacitor protection on the Lugo 500 kV Transmission Line
- Replace existing series capacitor yard lighting with light-emitting diode lighting
- Install a new 3,300-amp series capacitor bank on the Lugo 500 kV Transmission Line with required platforms, support insulators, foundations, conduits or trenches, cables, conductors, and buses and/or cable interconnections
- Install new internal bypass switches
- Incorporate internal and external bypass switches, isolating disconnect switches, and ground switches into interlock logic, including conduits and terminating control and power wiring to terminal blocks in switches and Control & Protection panels in the series capacitor MEER
- Provide control and power, wiring, testing and commissioning to 500 kV external bypass switch and motor-operated isolating disconnect switches with ground attachments, including conduits from the Lugo series capacitors' MEERs to interface with SCE conduits for these switches located within the substation
- Install a new MEER for series capacitor with series capacitor Control & Protection panels, Human-Machine Interfaces, digital fault recorder, AC/DC panels, telecommunications racks, batteries, battery chargers, HVAC equipment, emergency lighting, and security panels
- Install conduits and trenches as required
- Modify fencing for series capacitors
- Install task lighting, tool outlets, and equipment power test outlet (100 amp) within the series capacitor's fenced area
- Install and/or modify grounding grid within the series capacitor fence, as well as equipment and personnel ground connections for all equipment
- Remove the existing foundation, platform, and equipment for the series capacitor
- Replace the conductor between dead-end structures in the area of the series capacitor bank with new two-bundled 2,156 kcmil 84/19 stranded "BLUEBIRD" ACSR
- Relocate isolating disconnect switches as needed to accommodate the new 500 kV series capacitor
- Install auxiliary switches for grounding attachments on the isolating disconnect switches
- Install new foundations, structures, and grounding for the new equipment

- Provide new conduits and home-run cables from the isolating disconnect switches to the new series capacitor MEER
- Install relays for local breaker failure backup for new circuit breakers
- Add motor-operating mechanisms to existing isolating disconnect switches
- Install additional telecommunications equipment—including channel equipment, light wave equipment, and fiber tie cables between buildings and existing MEER where required—to provide two diverse communication paths
- Construct a berm to divert storm water run-on away from the substation; a retention/detention basin would be provided to mitigate the increase in runoff as a result of this development

## 115 kV Subtransmission Lines

The Proposed Project would reframe two existing poles on the Cottonwood-Savage 115 kV Subtransmission Line located approximately 2,300 feet west of the intersection of Joshua Road and Desert View Road in Apple Valley, California. The underbuild distribution circuits will be relocated.

#### **Distribution Lines**

The Proposed Project includes the construction and relocation of distribution lines to provide electrical service to project components.

- Construct Distribution facilities to provide temporary as well as permanent Station Light & Power service to Mid-line Capacitor sites, telecommunications sites and other sites as needed.
- Relocate Distribution facilities where required to accommodate project construction as needed.

# V. EVALUATION OF "NO-COST AND LOW-COST" MAGNETIC FIELD REDUCTION DESIGN OPTIONS

For the purpose of evaluating "no-cost and low-cost" magnetic field reduction design options, the evaluation of magnetic fields associated with the Project is divided into three parts:

- Part 1 Proposed Substation and Mid-Line Capacitors Work
- Part 2 Proposed 500 kV Transmission Line Work
- Part 3 Proposed 115 kV Subtransmission Line Work

Telecom and distribution work are not part of this FMP evaluation except for the relocation of distribution circuits on 115 kV structures that will be reframed.

# Part 1 - Proposed Substation and Mid-Line Capacitors Work

As part of the Proposed Project, series capacitors are installed at Lugo 500 kV Substation, Eldorado 500 kV Substation, and will be modified at Mohave 500 kV Substation. The SCE EMF Design Guidelines preferred setback distance from property lines for 500 kV capacitors is 40 feet. The series capacitors installed or will be installed at all these substations have more than 45 feet of setback distance from the substation property lines. The EMF reduction measure of placing substation series capacitors away from the substation property lines is considered as no-cost as it is part of the preliminary design.

The Newberry Spring Mid-Line Series Capacitors will have approximately 36 feet setback distance from the grading limit. It will be less than the SCE preferred EMF Design Guidelines of 40 feet of setback distance for 500 kV capacitors. Since the location of the Newberry Spring Mid-Line Series Capacitors site is in undeveloped area, the low-cost option of extending the grading was considered, but not adopted. No additional EMF reduction measures were considered.

The Ludlow Mid-Line Series Capacitors will also have more than 40 feet of setback distance from the edges of the graded site. The EMF reduction measure of placing mid-line series capacitors in undeveloped areas is considered to be no-cost as the locations selected were part of the preliminary design. No additional EMF reduction measures were considered.

# Part 2 - Proposed 500 kV Transmission Line Work

The series capacitors will increase the load flow rating of Eldorado-Lugo, Lugo-Mohave, and Eldorado-Mohave 500 kV transmission lines. There are total of 16 potential General Order (GO) 95 clearance discrepancies due to the projected increased load flow. Out of these 16 potential discrepancies, 15 of them would be corrected by either raising the existing structural height, reframing 115 kV subtransmission poles (see Part 3) to increase line clearance, or grading down

the berm to increase ground clearance, and would result in reducing EMF at the ground level. The EMF reduction measure of re-arranging the phase conductors is not considered for this project as replacing conductors is not part of the scope of the Proposed Project and therefore is not a no-cost or low-cost option.

All these 16 potential clearance discrepancies are located in undeveloped areas. Therefore, no additional EMF reduction measures were considered and no EMF models were used to compare various design options.

## Part 3 - Proposed 115 kV Subtransmission Line Work

The Eldorado-Lugo and Lugo-Mohave 500 kV transmission lines cross the Cottonwood-Savage 115 kV Subtransmission Line west of the intersection of Joshua Road and Desert View Road in Apple Valley. The Proposed Project will reframe two 115 kV structures by lowering the 115 kV lines by five feet, and relocating the underbuild distribution lines. There is no population within a 2,000 foot radius of these two structures, and therefore the EMF exposure change was not evaluated.

# VI. FINAL RECOMMENDATIONS FOR IMPLEMENTING "NO-COST AND LOW-COST" MAGNETIC FIELD REDUCTION DESIGN OPTIONS

In accordance with the "EMF Design Guidelines", filed with the CPUC in compliance with CPUC Decisions 93-11-013 and 06-01-042, SCE would implement the following "no-cost" magnetic field reduction design options for the Project:

## Part 1 - Proposed Substation Work

## **Newberry Springs Mid-Line Series Capacitors:**

• Install mid-line series capacitors in undeveloped areas

Low-cost EMF reduction measure not recommended:

• Place mid-line series capacitors at least 40 feet away from the graded area property lines

## Ludlow Mid-Line Series Capacitors:

- Install mid-line series capacitors in undeveloped areas
- Place mid-line series capacitors at least 40 feet away from the graded area property lines

#### Lugo 500 kV Substation:

- Place substation series capacitors away from the substation property lines
  - Maintain the 500 kV series capacitors at least 40 feet setback distance from the substation property lines

#### Eldorado 500 kV Substation:

- Place substation series capacitors away from the substation property lines
  - Maintain the 500 kV series capacitors at least 40 feet setback distance from the substation property lines

#### Mohave 500 kV Substation:

- Place substation series capacitors away from the substation property lines
  - Maintain the 500 kV series capacitors at least 40 feet setback distance from the substation property lines

# Part 2 - Proposed 500 kV Transmission Line Work

#### Eldorado-Lugo 500 kV Transmission Line:

- Utilize taller structure heights in areas with potential overhead discrepancies
  - M14-T4: Raise tower by a minimum of 18.5 feet
  - M33-T1: Raise tower by a minimum of 5 feet

- M63-T3: Raise tower by a minimum of 13.5 feet
- M64-T2: Raise tower by a minimum of 5 feet
- M97-T1: Raise tower by a minimum of 18.5 feet
- M97-T2: Raise tower by a minimum of 18.5 feet
- Relocate underbuild distribution circuits on 115 kV structures
  - M20-T2 to M20-T3: Reframe two Cottonwood-Savage 115 kV structures nearby and relocate the underbuild distribution circuits
- Increase conductor ground clearance
  - M58-T1 to M58-T2: Modify conductor to transfer the sag by 5 inches on both ends of the span

# Lugo-Mohave 500 kV Transmission Line:

- Increase conductor ground clearance
  - M4-T2 to M4-T3: Remove concrete below conductor by a minimum of 3.5 feet
  - M29-T3 to M30-T1: Grade down the berm by a minimum of 2 feet
  - M89-T1 to M89-T2: Modify conductor to transfer the sag by 36 inches
- Utilize taller structure heights in areas with potential overhead discrepancies
  - M22-T4: Raise tower by a minimum of 13.5 feet
  - M68-T1: Raise tower by a minimum of 8.5 feet
- Relocate underbuild distribution circuits on 115 kV structures
  - M20-T3 to M20-T4: Reframe two Cottonwood-Savage 115 kV structures nearby and relocate the underbuild distribution circuits

#### Eldorado-Mohave 500 kV Transmission Line:

Utilize taller structure heights in areas with potential overhead discrepancies
 M4-T1: Raise tower by a minimum of 18.5 feet

The recommended "no-cost" magnetic field reduction design options listed above are based upon preliminary engineering design. If the preliminary engineering design is significantly modified (in the context of evaluating and implementing CPUC's "no-cost and low-cost" EMF Policy), then an Addendum to the FMP will be prepared.

SCE's plan for applying the above "no-cost and low-cost" magnetic field reduction design options uniformly for the Project is consistent with the CPUC's EMF Decisions No. 93-11-013 and No. 06-01-042. Furthermore, the recommendations above meet the CPUC approved EMF Design Guidelines, as well as all applicable national and state safety standards for new electrical facilities.

# **APPENDIX G**

# Agency Consultation

# **Audry Williams**

From:	Lee Clauss <lclauss@sanmanuel-nsn.gov></lclauss@sanmanuel-nsn.gov>		
Sent:	Sunday, July 09, 2017 10:05 PM		
То:	'Jim Shearer (JShearer@blm.gov)'; Audry Williams; Brian McDonald		
Cc:	Ann Brierty		
Subject:	(External):Eldorado-Lugo-Mohave Capacitor Project (ELMCP) and Lugo-Victorville Transmission Line Special Protection Scheme (LVRAS)		

Dear Jim,

Thank you for contacting the San Manuel Band of Mission Indians' (SMBMI) Cultural Resources Management (CRM) Department regarding the above-referenced projects last week. SMBMI received project documentation from the BLM-California Desert District on June 8, 2017, and SC Edison on July 3, 2017. Over the last thirty (30) days, the CRM Department staff has initiated their review of this information and internal discussions about project history and cultural landscapes within the proposed projects' APEs.

As you know from SMBMI's history with the Coolwater Lugo project and our conversation last week, the proposed project areas exists within Serrano ancestral territory and, due to the cultural sensitivity of significant portions of the projects' APEs, these proposed undertakings are of great interest, and concern, to the Tribe. As such, SMBMI does indeed request to enter into consultation with BLM, pursuant to NHPA and its implementing regulations, for both the ELMCP and LVRAS.

More specifically, I have personally reviewed the project description and maps, as well as the Class III Work Plan for the ELMCP and LVRAS. As the APE maps and Work Plan provided are final versions, it would appear that written edits are not warranted as they will not be incorporated. However, I would like to request that we schedule a time to either conduct a conference call or in-person meeting to discuss:

(1) the LOE being applied in the field, specifically with regard to sub-surface testing;

(2) the manner by which BLM intends to consult with SMBMI on the subject of NRHP-eligibility, assessment of effect, and avoidance/minimization/mitigation;

(3) tribal monitoring and/or CRM staff visits during the conduct of the Class III survey and that survey's status;

(4) draft report distribution and comment workflows/timelines; and

(5) the development of a comprehensive discovery and monitoring (archaeological and tribal) plan to be implemented during project construction.

I have also completed a preliminary read of the Ethnographic and Ethnohistoric Overview for the ELMCP and LVRAS. That said, before providing comment on the adequacy and/or accuracy of this document, I will have Ann Brierty, CRM Field Specialist, conduct her own review--due to her in-depth institutional knowledge of past projects in this same area. It is my goal to coalesce the results of our separate reviews and be ready to provide comments on the EEO during the proposed call/meeting requested above.

To this end, if you would please indicate dates from <u>July 24-August 11, 2017</u> that might work for you by which we can conduct a call or meeting, that would be most appreciated.

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In the interim, if you should have any further questions with regard to SMBMI's interest in these undertakings, please do not hesitate to contact me at your convenience, as I will be your Point of Contact (POC) for SMBMI at this time with respect to these projects.

(FYI: I have included SCE representatives on this initial e-mail to note, for their administrative files, SMBMI's desire to consult pursuant to NHPA and CEQA on both projects.)

Respectfully,

Lee

Lee Clauss DIRECTOR, CRM O: (909) 864-8933 x3248 Internal: 50-3248 M: (909) 633-5851 26569 Community Center Drive, Highland California 92346 SAND OF MISSION INDIANS

THIS MESSAGE IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW. If the reader of this message is not the intended recipient or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination or copying of this communication is strictly prohibited. If you have received this electronic transmission in error, please delete it from your system without copying it and notify the sender by reply e-mail so that the email address record can be corrected. Thank You



# TWENTY-NINE PALMS BAND OF MISSION INDIANS

46-200 Harrison Place . Coachella, California . 92236 . Ph. 760.863.2444 . Fax: 760.863.2449

July 25, 2017

CERTIFIED MAIL # 7014 2870 0001 7379 0958 RETURN RECEIPT REQUESTED

Audry Williams, Senior Archaeologist Southern California Edison 2244 Walnut Grove Avenue Rosemead, CA 91770

RE: Cultural Resources Inquiry for Southern California Edison Company's Eldorado-Lugo-Mohave Capacitor Project in San Bernardino County, California and Clark County Nevada

Dear Ms. Williams,

This letter is in regards to a cultural resources inquiry for the Southern California Edison Company's Eldorado-Lugo-Mohave Capacitor Project. This project entails the construction of two new 500 kV mid-line series capacitors. The Twenty-Nine Palms Band of Mission Indians ("Tribe"), are a Chemehuevi people who are a federally recognized tribe, with two reservations – one located near the cities of Coachella in Riverside County and the other located near the city of Twentynine Palms in San Bernardino County. The traditional territory of the Chemehuevi lies within a portion of the Project Area, and there are multiple places of cultural or religious significance within or near the undertaking that may be adversely affected by the undertaking. The THPO sent a letter to the Bureau of Land Management – California Desert District (BLM), who is acting as the lead Federal agency, on June 9, 2017, with an overview of specific areas of concern within or near this project. As stated in our letter sent to the BLM there are multiple culturally sensitive areas and culturally sensitives sites within the indirect or direct APE or viewshed of the undertaking.

There is an increased possibility of encountering cultural resources during the construction processes that may take place because the undertaking is located near or in a culturally sensitive area and site and it is within the Chemehuevi Traditional Use Area. Avoidance, if feasible, would negate adverse effects on the undertaking. As specified in our aforementioned letter, the tribe requests to review any of the cultural reports related to this undertaking and to review the Draft Built Environment Review and Evaluation Report and Site Forms for Review. Additional recommendations will be issued after review of all available cultural reports.

The Tribe and THPO look forward to continuing working with the Bureau of Land Management and Southern California Edison on this undertaking. If you have any questions, please do not hesitate to contact the Tribal Historic Preservation Office at (760) 775-3259 or by email: TNPConsultation@29palmsbomi-nsn.gov. Sincerely,

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Anthony Madrigal, Jr. Tribal Historic Preservation Officer

cc: Darrell Mike, Twenty-Nine Palms Tribal Chairman Sarah Bliss, Twenty-Nine Palms Tribal Cultural Specialist Brian McDonald, Government Affairs Tribal Representative From: Anita Flores [mailto:anita.flores@crit-nsn.gov]
Sent: Friday, August 04, 2017 3:09 PM
To: Brian McDonald <<u>Brian.McDonald@sce.com</u>>
Subject: (External):Eldorado-Lugo-Mohave Capacitor Project

Mr. Brian McDonald,

Please be advised that David Harper is no longer associated with the Colorado River Indian Tribes' Tribal Historic Preservation Office. Mr. Brian Etsitty has been appointed as the Acting Director and would like to schedule a date and time with you to go over the Eldorado-Lugo-Mohave Capacitor Project. Mr. Etsitty is available on either Monday, August 21<sup>st</sup> or Monday, August 28<sup>th</sup> for a teleconference call with your Office on this project.

You may contact Mr. Etsitty via email at <u>bryan.etsitty@crit-nsn.gov</u> or via phone, (928) 669-5822 to schedule the conference call.

Sincerely, Anita L. Flores Tribal Historic Preservation Office 13390 1<sup>st</sup> Avenue (928) 669-5822 <u>anita.flores@crit.nsn.gov</u>

# ATTACHMENT PROPONENT'S ENVIRONMENTAL ASSESSMENT Archival Grade DVD



## **BEFORE THE PUBLIC UTILITIES COMMISSION OF THE**

## STATE OF CALIFORNIA

A1805007

04:59 PM

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-xxx (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 the APPLICATION OF SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) FOR A PERMIT TO CONSTRUCT ELECTRICAL FACILITIES: ELDORADO-LUGO-MOHAVE SERIES CAPACITOR PROJECT, on all parties identified below. Service was effected by transmitting copies via email to the e-mail addresses listed below:

Billie Blanchard	Billie.Blanchard@cpuc.ca.gov
Lonn Maier	Lonn.Maier@cpuc.ca.gov
Fritts Golden	FGolden@aspeneg.com
Susan Lee	SLee@aspeneg.com

and by placing the copies in sealed envelopes and causing such envelopes to be delivered by U.S. Mail to the offices of the Chief Administrative Law Judge:

Chief ALJ Anne Simon CPUC - Division of ALJs 505 Van Ness Ave, Room 5115 San Francisco, CA 94102

Executed this May 2, 2018, at Rosemead, California.

/s/ Angelica Gamboa

Angelica Gamboa Legal Administrative Assistant SOUTHERN CALIFORNIA EDISON COMPANY

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

Appendix F

Field Management Plan (Amended Excerpt Only)

## Amendment to Appendix F

## FIELD MANAGEMENT PLAN

## Eldorado-Lugo-Mohave Series Capacitor Project

Please refer to the original Field Management Plan (FMP) previously filed with the Permit to Construct (PTC) application on 5/2/2018. The FMP has no changes with the exception of the additional scope added on page 23.

- Provide new conduits and home-run cables from the isolating disconnect switches to the new series capacitor MEER
- Install relays for local breaker failure backup for new circuit breakers
- Add motor-operating mechanisms to existing isolating disconnect switches
- Install additional telecommunications equipment—including channel equipment, light wave equipment, and fiber tie cables between buildings and existing MEER where required—to provide two diverse communication paths
- Construct a berm to divert storm water run-on away from the substation; a retention/detention basin would be provided to mitigate the increase in runoff as a result of this development

#### Modifications at the existing McCullough Substation (LADWP) include the following:

• Replacing 4,000 amp 50kA circuit breakers with 4,000 amp 63kA circuit breakers

#### 115 kV Subtransmission Lines

The Proposed Project would reframe two existing poles on the Cottonwood-Savage 115 kV Subtransmission Line located approximately 2,300 feet west of the intersection of Joshua Road and Desert View Road in Apple Valley, California. The underbuild distribution circuits will be relocated.

#### **Distribution Lines**

The Proposed Project includes the construction and relocation of distribution lines to provide electrical service to project components.

- Construct Distribution facilities to provide temporary as well as permanent Station Light & Power service to Mid-line Capacitor sites, telecommunications sites and other sites as needed.
- Relocate Distribution facilities where required to accommodate project construction as needed.

Appendix G

Articles of Incorporation

## APPENDIX G CORPORATE INFORMATION

SCE is a corporation organized and existing under the laws of the State of California, and is primarily engaged in the business of generating, purchasing, transmitting, distributing and selling electric energy for light, heat and power in portions of central and southern California as a public utility subject to the jurisdiction of the California Public Utilities Commission. SCE's properties, which are located primarily within the State of California, consist mainly of hydroelectric and thermal electric generating plants, together with transmission and distribution lines and other property necessary in connection with its business.

SCE's principal place of business is 2244 Walnut Grove Avenue, Rosemead, California, and its post office address and telephone number are:

> Southern California Edison Company Post Office Box 800 Rosemead, California 91770 Telephone: (626) 302-1212

Communications in regard to this Application are to be addressed to the attention of Selya Arce, at 2 Innovation Way Pomona, CA 91768; telephone number (909) 274-3709.

A copy of SCE's Certificate of Restated Articles of Incorporation, effective on March 2, 2006, and presently in effect, certified by the California Secretary of State, was filed with the Commission on March 14, 2006, in connection with Application No. 06-03-020, and is incorporated herein by this reference pursuant to Rule 2.2 of the Commission's Rules of Practice and Procedure.

A copy of SCE's Certificate of Determination of Preferences of the Series D Preference Stock filed with the California Secretary of State on Appendix H

**Competing Entities** 

ELDORADO-LUGO-MOHAVE SERIES CAPACITOR PROJECT

## ELDORADO-LUGO-MOHAVE SERIES CAPACITOR PROJECT COMPETING ENTITIES

The proposed construction in California lies entirely within the boundaries of SCE's existing service territory. The Project traverses approximately 70 miles of NV Energy service territory in order to connect to the Eldorado and Mohave Substations, these lines as well as Eldorado and Mohave Substations where proposed series capacitor upgrade construction would occur, all are existing SCE operated facilities connecting to the CAISO grid. As such, the Project will not compete with any other utility, corporation or person.

Appendix I

Annual Revenue Requirement

## ANNUAL REVENUE REQUIREMENT

Most of the facilities that comprise the Eldorado-Lugo Series Capacitors Project are electric transmission facilities, for which the reasonableness of costs and associated ratemaking are under the exclusive jurisdiction of the Federal Energy Regulatory Commission ("FERC").

If the FERC determines that there are facilities the costs of which are ineligible for recovery in FERC-jurisdictional rates, SCE will seek recovery under Public Utilities Code Section 399.2.5(b)(4).

The specific annual revenue requirements of such costs are not presently known. As such, SCE is providing the following annual revenue requirements table for illustration purposes only and these values are based on SCE's revenue requirements modeling. The table below only includes the illustrated annual revenue requirements, in millions of dollars, from 2019 through 2028.

\$ in Millions	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Annual Revenue Requirement	\$6.8	\$10.7	\$19.0	\$42.6	\$41. <b>2</b>	\$39.6	\$38.1	\$36.6	\$35.3	\$33.9

Appendix J

**Estimated Project Costs** 

# Eldorado-Lugo-Mohave Series Capacitors Project

2019 DOLLARS

roject Element		Cost <sup>1</sup>
Licensing		\$16
Regulatory/Licensing		16
Substation and Series Capacitors		\$142
Eldorado		26
Lugo		35
Mohave		31
Newberry Springs		20
Ludlow		20
McCullough		10
Fransmission		\$32
Eldorado-Mohave OPGW		6
Lugo-Mohave OPGW (CA)		20
Lugo-Mohave OPGW (NV)		1
Eldorado-Lugo GO-95 Infraction		5
Distribution		\$1
All Distribution works		1
Felecommunication		\$15
IT/Telecom		7
Transmission Telecom		8
Real Estate		\$3
Actual cost and labor for land acquisition / easements		\$3
		404
Environmental		\$21
Monitoring and Mitigation		17
Restoration		4
	Direct Expenditures: <sup>2</sup>	\$230
	Contingency:	\$20
	Total Cost:	\$250

#### NOTES:

<sup>1</sup>Costs in 2019 constant dollars, Millions

<sup>2</sup>Numbers may not add due to rounding

Appendix K

Permit List

–Permit/Approval	Agency	Purpose/Jurisdiction		
Federal				
ROW Grant	BLM	500 kV Transmission Lines and access roads. Construction on BLM administrated lands		
Special Use Permit	NPS (MNP)	500 kV Transmission Lines and access roads		
Special Use Permit	NPS (MNP)	Construction of NPS administered lands.		
Record of Decision	BLM	Considers Federal actions on the project approval		
Notice to Proceed	BLM	Final BLM approval to proceed with construction		
Section 7 Consultation	USFWS	Federal listed, threatened, and endangered species		
Section 106 Consultation, National Historic Preservation Act	BLM	Cultural resources listed or eligible for listing on the National Register or Historic Places		
Clean Water Act Section 404 Permit (CA and NV) – Nationwide	USACE	Construction impacting waters of the United States including wetlands		
7460(1) Permit and Notice Proposed Construction or Alteration	FAA	Erection of tall structures or the use of tall construction equipment in the vicinity of an airport		
Permit	USBOR	500 kV Transmission Lines and access roads		
Field Work Authorization (Arch)	BLM	Ability to conduct surveys		
Field Work Authorization (Paleo)	BLM	Ability to conduct surveys		
Archaeological Resources Protection Act (ARPA) Permit	NPS (MNP)	Permit for Archaeological Investigations within the MNP		
SF-299 Commercial Vehicle Permit	NPS (MNP)	To allow non-SCE vehicles to travel within the 500 kV transmission line corridors located within the MNP to conduct surveys or field verification for existing infrastructure		
State				
CPCN	CPUC	State lead agency to approve project		
Notice to Proceed	CPUC	Final CPUC approval to proceed with construction		
Declaratory Order or Advisory Opinion	PUCN	Nevada UEPA Permit to Construct not required		
2081 Incidental Take Permit	CDFW	State listed threatened or endangered species		
401 Certification - CA	State Water Resources Control Board	Certifies that activities subject to a federal permit meet state water quality standards		
401 Certification - NV	Nevada Division of Environmental Protection (NDEP)	Certifies that activities subject to a federal permit meet state water quality standards		
Temporary work in waterways permit - NV	Nevada Division of Environmental Protection (NDEP)	Regulates work in waterways		
1602 Streambed Alteration Agreement	CDFW	Activity that may modify a river, stream, or lake		

–Permit/Approval	Agency	Purpose/Jurisdiction		
NPDES Construction General Permit for Discharges of Storm Water	State Water Resources Control Board	Construction activities that disturb more than one acre of soil		
NPDES Construction General Permit for Discharges of Storm Water	Nevada Division of Environmental Protection (NDEP)	Construction activities that disturb more than one acre of soil		
Oversize Load/Special Load Permit	Caltrans	Movement of vehicle/loads exceeding statutory limitations on the size, weight, and loading of vehicles		
Encroachment Permit	Caltrans	Activities related to the placement of encroachments within, under, or over the State highway ROWs		
Permit Type (TBD)	California State Lands Commission	Activities related to the placement of encroachments and landing zones within, under, or over the State of California School Lands		
Encroachment Permit	CA and NV Cities or Counties, NVDOT	OH/UG crossings over or under travel ways during OPGW stringing and work areas		
NDOW Special Purpose Permit/Wildlife Authorization	NV Department of Wildlife	State listed threatened or endangered species		
Operational Permit (CA and NV Fire Codes)	CA and NV	Operation of 500-gallon or greater propane tanks		
Local				
Dust Control Permit	Clark County DAQ, NV	A dust control plan will need to be submitted to County		
Generator Permit	MDAQMD	Use of temporary and permanent generators exceeding 50 horsepower		
Landscaping Permit	Cities or Counties	County/City approval of landscaping plan		
Tree Removal Permit	Cities or Counties	Tree trimming or removal for line clearance requirements		
San Bernardino County Fire Protection District, Hazardous Materials Division Permit	San Bernardino County	Facility inspections and management of a facility's Hazardous Materials Business Plan program		
Fire Permit - CA	Cities or Counties	If batteries are over 70 Kilowatt, fire permit may be needed		
Hazardous Materials Permits	CA and NV Counties	Hazardous materials inventory for materials used for construction (e.g. batteries, SF6 gas)		
Grading Permit	San Bernardino and Clark Counties	Project work that includes earthwork		
Building Permit - (e.g., Fence)	San Bernardino and Clark Counties	Construction activity subject to the county building code requirements. Desert Tortoise fencing design also needs to be approved by the BLM, CDFW, and USFWS		
Building Permit - (e.g., MEER)	San Bernardino and Clark Counties	Construction activity subject to the city or county building code requirements.		
Temporary Entry Permit or Temporary Construction Easement (e.g., Material and Storage Yards, Landing Zones, Access Roads)	Counties or Private Property Owners	Approval to use project work areas		
Demolition Permit	CA and NV Cities or Counties	Demolition of existing platforms and equipment at substations		

–Permit/Approval	Agency	Purpose/Jurisdiction
Encroachment Permit (e.g., Traffic Control Plan, Iane closure)	NV Cities or Counties	Activities related to the placement of encroachments within, under, or over the State highway ROWs
Permit/Agreement/ Consent Type (TBD)	Western Area Power Administration (WAPA)	SCE 500 kV Transmission Line crossing WAPA 230 kV Transmission Line in Nevada
License, Easement, or Agreement (RR Permits)	BNSF and UPRR	OH crossings over railways during OPGW stringing