

## 1.0 PURPOSE AND NEED

Southern California Edison Company (SCE) proposes to construct the West of Devers (WOD) Upgrade Project (Proposed Project) to increase the power transfer capability of the WOD 220 kV transmission lines between Devers, El Casco, Vista, and San Bernardino substations (see Figure 1-1, West of Devers Project Area). The Proposed Project is needed to facilitate the full deliverability<sup>1</sup> of new electric generation resources being developed in eastern Riverside County, in an area designated by the California Independent System Operator (CAISO) for planning purposes as the Blythe and Desert Center areas (see Figure 1-2, California Independent System Operator Designated Blythe and Desert Center Areas). The Proposed Project, planned to be operational by 2019/2020, would be constructed primarily within disturbed rights-of-way (ROW), although some new ROW would be required. SCE needs to acquire upgraded rights in the reservation trust land (the “Reservation”) of the Morongo Band of Mission Indians (“Morongo”).

The Proposed Project would upgrade the existing WOD transmission line system by replacing the existing WOD 220 kV transmission lines and associated structures with new, higher-capacity transmission lines and structures; installing new and/or upgraded substation facilities; and making telecommunication improvements (see Chapter 3.0, Project Description, for a complete description of the Proposed Project). In particular, the Proposed Project would:

- Upgrade substation equipment within SCE’s existing Devers, El Casco, Etiwanda, San Bernardino, and Vista substations in order to accommodate increased power transfer on the upgraded WOD 220 kV transmission lines. Upgrade SCE’s existing Timoteo and Tennessee 66/12 kV substations to accommodate 66 kV subtransmission line relocations.
- Remove and upgrade the following existing 220 kV transmission lines and structures with new transmission lines and structures utilizing double-bundled 1590 kcmil Aluminum Conductor Steel-Reinforced (2B-1590 ACSR) conductor:
  - Devers – El Casco (approximately 30 miles);
  - El Casco – San Bernardino (approximately 14 miles);
  - Devers – San Bernardino (approximately 43 miles);
  - Devers – Vista No. 1 and No. 2 (approximately 45 miles each);
  - Etiwanda – San Bernardino (approximately 3.5 miles); and
  - San Bernardino – Vista (approximately 3.5 miles).

---

<sup>1</sup> The terms “full deliverability” or “full capacity deliverability status” describe the condition whereby a large generating facility is interconnected with the electrical grid to allow the full delivery of electricity requested. CAISO Tariff, Appendix A, at footnote 2, <http://www.caiso.com/2476/2476bc8114130.pdf>.

**This Page Intentionally Left Blank**

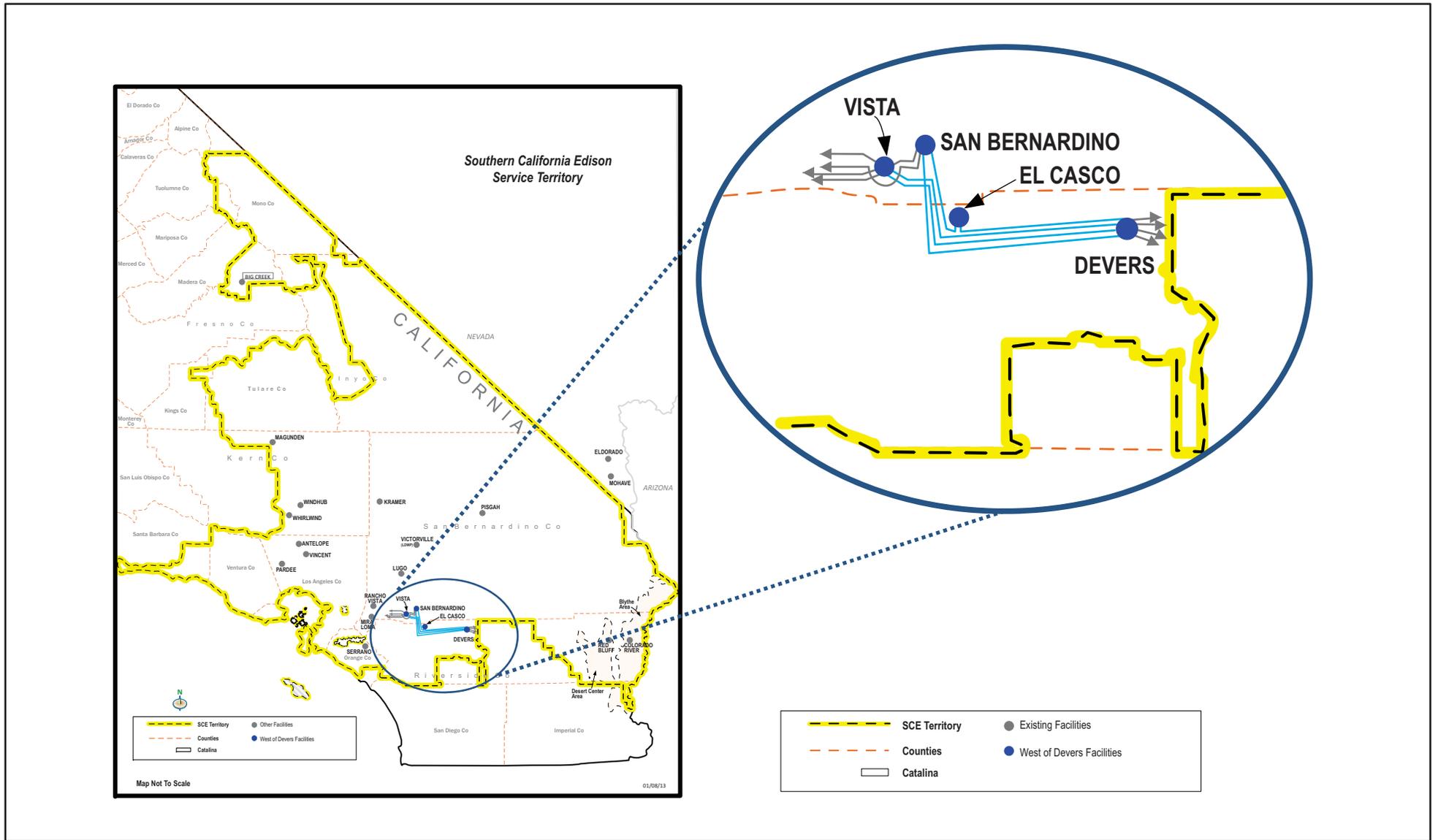


FIGURE 1-1



**This Page Intentionally Left Blank**

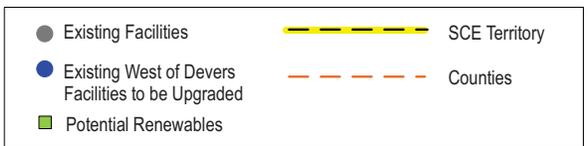
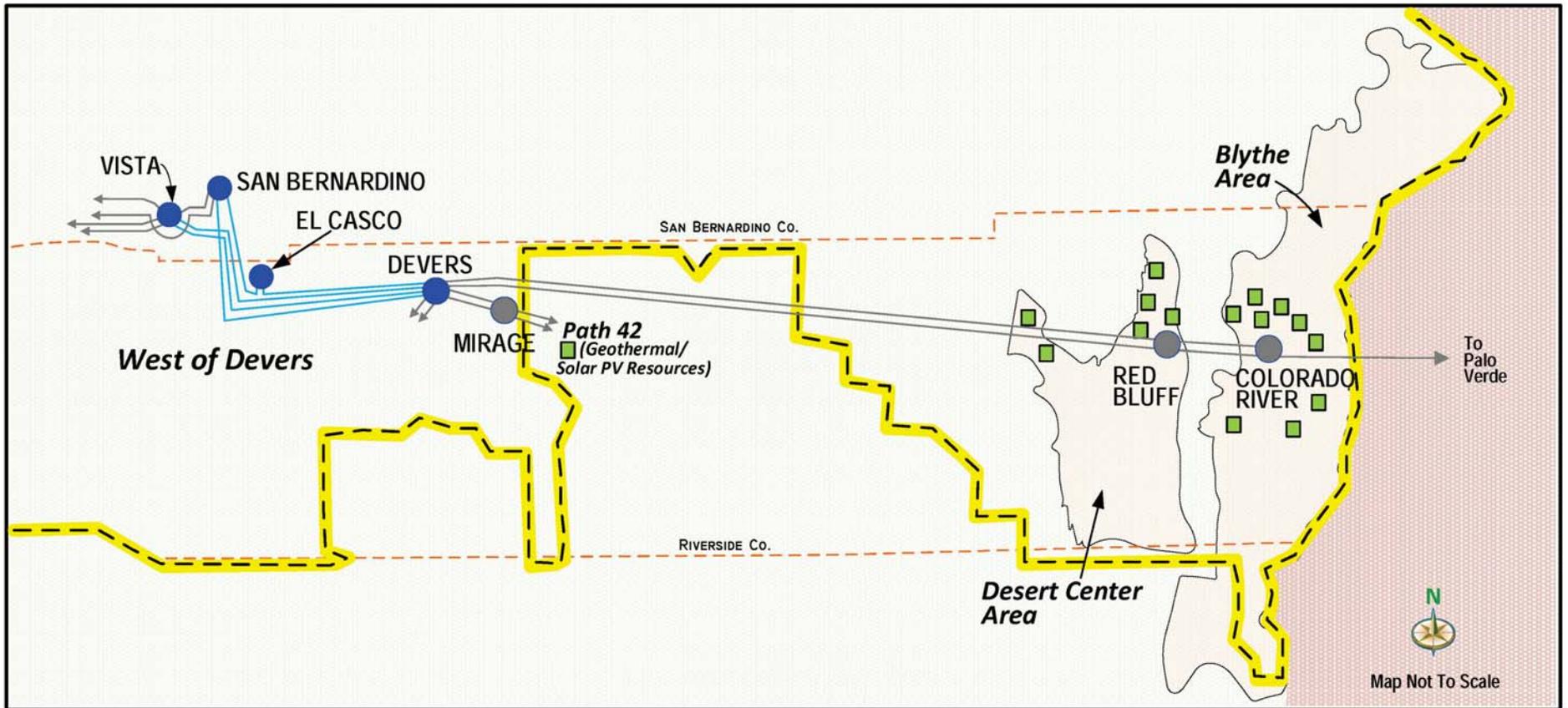


FIGURE 1-2

*Southern California Edison  
West of Devers Upgrade Project  
California Independent System  
Operator Designated Blythe  
and Desert Center Areas*

**This Page Intentionally Left Blank**

- Remove and relocate approximately 2 miles of two existing 66 kV subtransmission lines.
- Remove and relocate approximately 4 miles of existing 12 kV distribution lines.
- Install telecommunication lines and equipment for the protection, monitoring, and control of transmission lines and substation equipment.

The Proposed Project would be designed consistent with prudent transmission planning and the Garamendi Principles<sup>2</sup> to maximize use of the existing WOD corridor where practicable. As discussed below, it is possible that future energy development in the Blythe and Desert Center areas may require future transmission upgrades, although the scope of such futures upgrades, if any, is not known at this time. The Proposed Project would be configured in a manner that would not preclude possible future use of the existing WOD corridor in the event that additional transmission line upgrades become necessary. This would be done by placing the two sets of double-circuit transmission towers for the Proposed Project near the edge of the existing WOD corridor (primarily within the existing ROW width) in order to leave room within the existing ROW for future transmission. This approach is consistent with prudent transmission planning and would help minimize future environmental impacts by reducing the need for new or expanded ROW. If additional transmission upgrades become necessary in the future, this approach would help minimize the possibility of subsequent teardown and rebuilding activities to make room within the existing WOD corridor. Such need for future transmission within the existing WOD corridor has not yet been identified in any study. It is a not a reasonably foreseeable future phase and will not be further addressed in this PEA.

The Proposed Project has been identified by CAISO and SCE in the transition cluster Phase II study as a required Delivery Network Upgrade<sup>3</sup> for generation projects located in SCE's eastern area (from Devers to Colorado River substations). The CAISO approved the Proposed Project under its generation interconnection process by approving Large Generation Interconnection Agreements that have identified the project as needed to safely interconnect new generation (see FERC Docket Nos. ER11-4358-000, ER11-2318-000, and ER11-2455-000). The CAISO and SCE have completed subsequent cluster

<sup>2</sup> In 1988, California enacted Senate Bill 2431, which detailed the State's priorities for transmission planning known as the Garamendi Principles which encourage the following considerations with transmission planning: "1) encourage the use of existing rights-of-way by upgrading existing transmission facilities where technically and economically justifiable; 2) when construction of new transmission lines is required, encourage expansion of existing right-of-way, when technically and economically feasible; 3) provide for the creation of new rights-of-way when justified by environmental, technical, or economic reasons as determined by the appropriate licensing agency; and 4) where there is a need to construct additional transmission capacity, seek agreement among all interested utilities on the efficient use of that capacity." 1988 Cal. Legis. Serv. 1457 (West). *See also* California Public Utilities Commission (CPUC) Decision (D.) 09-12-044, Finding of Fact No. 14, at 93 ("The Garamendi Principles are statewide transmission siting policies that encourage the use of existing ROW by upgrading existing transmission facilities where technically feasible and economically justifiable.").

<sup>3</sup> The term "Delivery Network Upgrade" defines the "Transmission facilities at or beyond the Point of Interconnection, other than Reliability Network Upgrades, identified in the Interconnection Studies to relieve Constraints on the California ISO Controlled Grid." *See* [http://www.caiso.com/Pages/glossary.aspx?Paged=TRUE&p\\_SortBehavior=0&p\\_Term=CRR%20Payment&p\\_ID=175&PageFirstRow=201&&View={02340A1A-683C-4493-B284-8B949002D449}](http://www.caiso.com/Pages/glossary.aspx?Paged=TRUE&p_SortBehavior=0&p_Term=CRR%20Payment&p_ID=175&PageFirstRow=201&&View={02340A1A-683C-4493-B284-8B949002D449}).

studies for subsequent interconnection requests that continue to identify the Proposed Project as a needed Delivery Network Upgrade. In addition, the CAISO Transmission Planning Process (TPP) has confirmed that the Proposed Project is needed to facilitate California's achievement of the 33 percent Renewable Portfolio Standard goals by 2020.<sup>4</sup> As a result, the Proposed Project has been modeled as a baseline project in the CAISO TPP since 2010.<sup>5</sup> This means that since 2010, the CAISO has modeled the electrical system with the assumption that the Proposed Project would be in service starting in 2017.<sup>6</sup>

## 1.1 Project Purpose

This section describes the purpose of the Proposed Project. The need for the Proposed Project is described in Section 1.2, Project Need.

### 1.1.1 Integrate Planned Generation Resources

The Proposed Project would allow SCE to increase the power transfer capability of the WOD transmission facilities to enable the full deliverability of electrical power from generation resources located within the Blythe and Desert Center areas that have requested to interconnect to SCE's electrical transmission grid. Under orders issued pursuant to Sections 210 and 212 of the Federal Power Act (16 U.S.C. §§ 824i and 824k) and interconnection agreements executed pursuant to CAISO Fifth Replacement Electric Tariff, SCE is obligated to interconnect and integrate power generation facilities into its electric system and provide for the level of interconnection service requested.

When an electric generating facility makes an interconnection request, the CAISO evaluates whether transmission line upgrades are needed to safely and reliably satisfy the request. If the CAISO analysis indicates that transmission upgrades are needed, then the necessary upgrades are incorporated into a Generator Interconnection Agreement (GIA) that is entered into by the applicable interconnection customer(s), the utility (such as SCE), and the CAISO.

To manage multiple generator interconnection requests that are made for generation resources proposed to be located in the same geographic area, the CAISO has developed procedures for evaluating "clusters" of generation facilities in a single study based on the Interconnection Queue (i.e., the queue of generators that have requested interconnection with the CAISO).<sup>7</sup> The CAISO can, therefore, evaluate a cluster of queued facilities in a

---

<sup>4</sup> 2012–2013 TPP, at Table 2, p. 17, <http://www.caiso.com/Documents/BoardApproved2012-2013TransmissionPlan.pdf>.

<sup>5</sup> 2010–2011 TPP, <http://www.caiso.com/Documents/Board-approvedISO2010-2011TransmissionPlan.pdf>; Section 5.1.6, p. 253, Renewable Deliverability Potential Provided by LGIP Lines; Section 5.5.4, p. 287; 2011-2012 TPP, Executive Summary, Table 1, p. 18, <http://www.caiso.com/Documents/Board-approvedISO2011-2012-TransmissionPlan.pdf>; Section 4.3.4, Table 4.3-2, p. 284; Section 4.8.1, p. 331; 2012-2013 TPP, Section 4.1.3.4, Table 4.1-6, p. 223; Section 4.3, p. 271, <http://www.caiso.com/Documents/BoardApproved2012-2013TransmissionPlan.pdf>.

<sup>6</sup> 2010–2011 TPP, Table 6.2-3, p. 369, Renewable Transmission Project Modeled in the Base Case, <http://www.caiso.com/Documents/Board-approvedISO2010-2011TransmissionPlan.pdf>.

<sup>7</sup> See <http://www.caiso.com/planning/Pages/GeneratorInterconnection/Default.aspx>.

single study instead of assessing each facility in a separate study. The CAISO's cluster studies are referred to herein as Cluster Interconnection Studies.<sup>8</sup>

The CAISO Transition Cluster interconnection studies completed in 2010 identified the need to reconductor the four 230 kV transmission lines west of Devers Substation. These studies indicated that, without the WOD upgrades, the anticipated addition of new generation resources in the Blythe and Desert Center areas would result in unacceptable thermal overload conditions on the existing WOD transmission lines.<sup>9</sup> During the interconnection studies, it was determined that the WOD upgrades could not be operational until 2017/2018 due to estimated licensing and construction timelines. Consequently, in 2010, both the CAISO transition cluster study reports and executed LGIAs for generation projects were written with the assumption that the WOD upgrades would be operational in 2017/2018. In addition to the transition cluster studies, CAISO and SCE have completed cluster studies for subsequent interconnection requests that included the WOD upgrades in place at a time potentially beyond 2017/2018.

At this time, based on estimated licensing and construction timelines, SCE has a reasonable expectation that the WOD upgrades will not be operational until 2019/2020. Currently, the generators requesting full capacity and energy-only deliverability status<sup>10</sup> earlier than 2019/2020 are shown in Table 1.1, Interconnection Requests for the Blythe and Desert Center Areas. As indicated in Table 1.1, Interconnection Requests for the Blythe and Desert Center Areas, several generators requested an in service date as early as 2013/2014. Therefore, the Proposed Project is needed as early as 2013/2014.

Understanding that the Proposed Project would not be completed by the need date, CAISO and SCE developed an interim solution to partially address the requested full capacity deliverability needs on a temporary basis. This temporary upgrade, referred to as the West of Devers Interim Project, was implemented and planned to be in service by October 2013 to prevent overloading of the existing WOD transmission lines. The temporary upgrade would better utilize existing transmission capacity by balancing line loading on the existing WOD transmission lines and redirecting some flows onto the 500 kV system. This better utilization of system capacity allows for temporary deliverability of up to 1050 megawatts (MW) for Riverside County generation projects, but does not satisfy the requests of all generation projects in this area. Additionally, this temporary

<sup>8</sup> As directed by the Federal Energy Regulatory Commission, the CAISO has developed standardized interconnection procedures that govern the process by which generation interconnections are studied and ultimately connected to that portion of SCE's transmission system that is under the operational control of the CAISO. The currently effective, FERC-approved CAISO generator interconnection procedures can be found at: [http://www.caiso.com/Documents/TariffAppendixY\\_May1\\_2013.pdf](http://www.caiso.com/Documents/TariffAppendixY_May1_2013.pdf); [http://www.caiso.com/Documents/TariffAppendixDD\\_May1\\_2013.pdf](http://www.caiso.com/Documents/TariffAppendixDD_May1_2013.pdf)

<sup>9</sup> Calif. Independent System Operator, *Transition Cluster Phase II Interconnection Study Report: Group Report in SCE's Eastern Bulk System* (June 30, 2010), 23-28, [http://www.energy.ca.gov/sitingcases/blythe\\_solar/documents/others/2010-08-05\\_TCPI\\_Group\\_in\\_Report\\_SCE\\_TN-57896.pdf](http://www.energy.ca.gov/sitingcases/blythe_solar/documents/others/2010-08-05_TCPI_Group_in_Report_SCE_TN-57896.pdf).

<sup>10</sup> The term "energy-only deliverability status" is defined as a "condition elected by an Interconnection Customer for a Large Generating Facility interconnected with the CAISO Controlled Grid, the result of which is that the Interconnection Customer is responsible only for the costs of Reliability Network Upgrades and is not responsible for the costs of Delivery Network Upgrades. The Large Generating Facility will be deemed to have a Net Qualifying Capacity of zero, and, therefore, cannot be considered to be a Resource Adequacy Resource." See [http://www.caiso.com/Documents/ConformedTariff\\_Jul11\\_2013.pdf](http://www.caiso.com/Documents/ConformedTariff_Jul11_2013.pdf).

upgrade does not provide additional transmission capability and does not meet the full deliverability needs of all the generation resources shown in Table 1-1, Interconnection Requests for the Blythe and Desert Center Areas. Consequently, the Proposed Project is needed to be operational as soon as possible to meet the full capacity deliverability for the proposed generation projects in Eastern Riverside County as shown in Table 1.1, Interconnection Requests for the Blythe and Desert Center Areas, and Coachella Valley generation project as shown in Section 1.2.4, The Proposed Project is Needed to Facilitate Integration of Renewable Generation Resource Being Developed in the Coachella Valley Area.

**1.1.2 Comply with Large Generator Interconnection Agreements**

The Proposed Project would allow SCE to comply with executed and expected Large Generator Interconnection Agreements (LGIA). The CAISO Cluster Interconnection Studies demonstrate that the existing WOD transmission lines are inadequate to meet the level of service needed by new generation interconnection requests identified in Table 1.1, Interconnection Requests for the Blythe and Desert Center Areas. As such, Cluster Interconnection Studies identify the Proposed Project as needed to safely and reliably accommodate the full deliverability of the projects listed in Table 1.1, Interconnection Requests for the Blythe and Desert Center Areas.

**Table 1.1: Interconnection Requests for the Blythe and Desert Center Areas\***

CAISO Queue Position	CAISO Study (Study Completion Date)	Fuel Type	Project Size (MW)	Project Status	Current Online Date**
294	Transition Cluster July 8, 2010	Solar PV	485	LGIA – Executed	7/01/2013
365	Transition Cluster July 8, 2010	Solar Thermal	500	LGIA – Executed PPA – 500 MW under contract with Pacific Gas & Electric Co. (PG&E)	7/01/2013
421	Transition Cluster July 8, 2010	Solar PV	50	LGIA – Under negotiation	2/01/2012
193	Transition Cluster July 8, 2010	Solar PV	500	LGIA – Executed PPA – 250 MW under contract with Pacific Gas & Electric Co. (PG&E) PPA – 250 MW under contract with SCE	4/01/2014
576	Queue Cluster 2 August 26, 2011	Solar PV	224	LGIA – Under Negotiation	10/01/2016

**Table 1.1: Interconnection Requests for the Blythe and Desert Center Areas\***

CAISO Queue Position	CAISO Study (Study Completion Date)	Fuel Type	Project Size (MW)	Project Status	Current Online Date**
588	Queue Cluster 2 August 26, 2011	Solar PV	200	LGIA – Under Negotiation	6/01/2013
643AE	Queue Cluster 3 November 9, 2012	Solar PV	150	LGIA – Under Negotiation	1/01/2014
798	Queue Cluster 4 November 9, 2012	Solar PV	220	LGIA – Under Negotiation	12/31/2014
797	Queue Cluster 4 November 9, 2012	Solar PV	0.5	LGIA – Under Negotiation	12/31/2014
970	Study in process	Solar PV	150	CAISO Phase 1 Study	12/31/2016
Total			2479.5 MW		

\* Documents related to the CAISO Generator Interconnection Queue are available at <http://www.caiso.com/planning/Pages/GeneratorInterconnection/Default.aspx>.

\*\* The current online date is shown on the California ISO Controlled Grid Generation Queue - CISO Active at <http://www.caiso.com/Documents/ISOGeneratorInterconnectionQueue.pdf>.

Accordingly, SCE, the CAISO, and the applicable interconnection customers entered into negotiations to develop LGIAs to implement the required transmission upgrades. The executed LGIAs have been approved by the Federal Energy Regulatory Commission (FERC).

### 1.1.3 Support Integration of Generation with Power Purchase Agreements

The Proposed Project would support integration of generation facilities with executed Power Purchase Agreements (PPAs) and help SCE and other utilities satisfy obligations under those PPAs. A PPA is an agreement between an electric generator and utility (e.g., SCE) for the procurement of power. PPAs related to the Proposed Project are described above in Table 1.1, Interconnection Requests for the Blythe and Desert Center Areas.

### 1.1.4 Comply with Reliability Standards

The Proposed Project would allow SCE to comply with North American Electric Reliability Corporation (NERC)<sup>11</sup> Reliability Standards and the Western Electricity Coordinating Council (WECC) Regional Business Practices.<sup>12</sup> Transmission lines must be planned in accordance with Reliability Standards and the Regional Business Practices developed by the CAISO, WECC, NERC, and the individual utility.<sup>13</sup> These Standards require that the potential “loss” of transmission lines (both proposed and existing lines) be analyzed and the transmission system be designed to continue to function if a “loss” occurs. A transmission line would be considered “lost” when removed from service due to planned or unplanned events. In accordance with these Reliability Standards, SCE must utilize acceptable measures to ensure electric system reliability is maintained in the event of a loss of one or more transmission lines within the same transmission corridor. Depending on transmission planning studies, these measures may include installation of a Special Protection System (SPS),<sup>14</sup> construction of additional facility upgrades, or both.

Given the potential for electric system congestion (overloading) on the existing WOD transmission lines, an SPS is currently in place to maintain power flows. The SPS functions to preserve overall system integrity under normal operating and outage conditions. When operating conditions of the WOD transmission lines exceed their thermal loading limits, the SPS functions to automatically disconnect affected generation facilities to maintain power flows on the WOD transmission lines within acceptable operating limits. The existing SPS would not be adequate to meet the additional generation being planned and developed in the Blythe and Desert Center Areas. The Proposed Project would eliminate the need for the existing SPS and provide for increased power transfer capability.

### 1.1.5 Facilitate Progress Toward Achieving Renewables Portfolio Standard Goals By Providing Transmission Upgrades to Deliver Renewable Generation in the Blythe And Desert Center Areas

The Proposed Project would facilitate progress towards achieving California’s Renewables Portfolio Standard (RPS) goals. The Renewable Energy Transmission Initiative (RETI) is a statewide joint agency effort to help identify the transmission projects needed to accommodate California’s renewable energy goals, support future energy policy, and facilitate transmission corridor designation and transmission and

---

<sup>11</sup> NERC’s transmission planning standards are available at: [http://www.nerc.com/files/TPL-001-0\\_1.pdf](http://www.nerc.com/files/TPL-001-0_1.pdf); <http://www.nerc.com/files/TPL-001-2.pdf>; and <http://www.nerc.com/files/TPL-003-0a.pdf>; and <http://www.nerc.com/files/TPL-004-0.pdf>.

<sup>12</sup> WECC’s Regional Business Practices are available at: <http://www.wecc.biz/library/Documentation%20Categorization%20Files/Regional%20Business%20Practices/TPL-001-WECC-RBP-2.pdf>

<sup>13</sup> SCE’s transmission planning standards are available at: [http://asset.sce.com/Regulatory/Open%20Access%20Information/100813\\_InterconnectionHandbook.pdf?from=handbook](http://asset.sce.com/Regulatory/Open%20Access%20Information/100813_InterconnectionHandbook.pdf?from=handbook).

<sup>14</sup> An SPS is designed to detect abnormal system conditions and take automatic, pre-planned, corrective action (other than the isolation of faulted elements) to provide acceptable system performance. SPS actions may result in reduction in load or generation, or changes in system configuration to maintain system stability, acceptable voltages, or acceptable facility loading.

generation siting and permitting. A 2008 report by RETI indicates that both the Blythe and Desert Center areas (which are part of the “Riverside East” resources area) have the potential for large-scale solar development.<sup>15</sup> RETI identified the Proposed Project as an important transmission upgrade to deliver renewable energy from the Blythe and Desert Center areas in furtherance of the RPS.<sup>16</sup> Without the Proposed Project, constraints with the existing WOD transmission lines would continue to significantly limit the full deliverability of such renewable generation.

California’s RPS is one of the most ambitious renewable electricity goals in the United States.<sup>17</sup> The RPS requires retail sellers of electricity, including investor-owned utilities such as SCE, to increase sales of electricity from renewable energy sources (such as solar and wind) by 33 percent by the end of 2020. On October 7, 2013, Governor Jerry Brown signed into law Assembly Bill (AB) 327, which gives the CPUC the discretion to “require the procurement of eligible renewable energy resources in excess of” the levels established by the RPS.

To meet these renewable energy goals, new transmission facilities are needed to interconnect remote areas with high renewable generation potential to the electrical grid.<sup>18</sup> The CPUC has identified “access to transmission” as a “major barrier to the development of RPS projects.”<sup>19</sup> The CPUC stated: “California’s transmission system is constrained, and renewable resources are often located far from load centers and existing transmission lines.”<sup>20</sup> The California Energy Commission (CEC) has similarly concluded that extensive transmission improvements “are needed to California’s electric transmission infrastructure to get the electricity generated by new renewable power facilities to consumers.”<sup>21</sup>

### 1.1.6 Support Integration of Small Scale Generation

Under the California Renewable Energy Small Tariff (CREST), created by California’s AB 1969 and SB 380, and as implemented by the CPUC, SCE may purchase power from SCE retail customers who own and operate an eligible renewable generator with a total effective generation capacity of not more than three MW.

During periods where there was reduced electricity demand, there is more energy being generated than electrical demand in the Devers 115 kV system. Under these

<sup>15</sup> RETI, Phase 1B Final Report No. RETI-1000-2008-003-F (2009), at I-89, and App. C, p. 3.

<sup>16</sup> See Renewable Energy Transmission Initiative, Phase 2A Final Report (2009), at 3-95, <http://www.energy.ca.gov/2009publications/RETI-1000-2009-001/RETI-1000-2009-001-F-REV2.PDF>.

<sup>17</sup> CPUC, California Renewables Portfolio Standard, <http://www.cpuc.ca.gov/PUC/energy/Renewables>.

<sup>18</sup> See CPUC Decision D.08-10-037 at 8 (“We believe that a target of 33% of the State’s electricity from renewables by 2020 is achievable if the State commits to significant investments in transmission infrastructure and key program augmentation.”).

<sup>19</sup> CPUC, RPS Project Transmission Barriers, <http://www.cpuc.ca.gov/PUC/energy/Renewables/RPStransmissionbarriers.htm>.

<sup>20</sup> *Ibid.*

<sup>21</sup> RETI, <http://www.energy.ca.gov/reti/>.

circumstances, excess energy generated from the CREST projects would be transferred to the transmission system through the Devers 500/220/115 kV Substation. This excess energy would increase the existing congestion on the West of Devers transmission lines.

In addition to the CREST program, SCE customers have the option to generate their own power under SCE's Rule 21 non-export program. Rule 21 generation would result in a decrease of local area load. This decrease in demand would increase the amount of excess generation in this region, thereby increasing the congestion on the existing WOD transmission lines.

Because the system in the West of Devers corridor is already constrained, CREST and Rule 21 generation would further aggravate system reliability caused by the congestion on the WOD transmission lines. As of May 30, 2013, there are 33 active projects in the Devers distribution system. The Proposed Project would help alleviate congestion caused by CREST and Rule 21 generation.

### 1.1.7 Support California's Greenhouse Gas Reduction Program

The Proposed Project would facilitate integration of renewable resources (such as solar and wind) with minimal Greenhouse Gas (GHG) emissions from new generation in the Blythe and Desert Center areas. California's Global Warming Solutions Act of 2006 (commonly referred to as AB 32) was enacted to significantly reduce GHG emissions to 1990 levels by the year 2020. Executive Order S-3-05, issued June 2005, establishes the broader goal to reduce GHG emissions to 80 percent below 1990 levels by the year 2050.

To achieve the mandates of AB 32, the California Air Resources Board adopted a Scoping Plan that identifies the main strategies to reduce GHG emissions.<sup>22</sup> The Scoping Plan identifies achieving the RPS goals as a critical component for reducing GHG emissions in California.<sup>23</sup> The Proposed Project would help the State of California achieve GHG emissions-reduction mandates under AB 32 by facilitating compliance with current RPS goals. The Proposed Project would also support additional renewable generation in excess of the current RPS that may be needed to satisfy AB 32 or Executive Order S-3-05 GHG reduction goals.

### 1.1.8 Support Federal Renewable Energy Goals

Several of the proposed renewable generation resources<sup>24</sup> that require the Proposed Project are located on Federal lands. Executive Order 13212, Actions to Expedite Energy-Related Projects, requires Federal agencies to expedite review of project

---

<sup>22</sup> California Air Resources Board, AB 32 Climate Change Scoping Plan (2008), <http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>.

<sup>23</sup> *Ibid.* Figure 3 (p. 21) and pp. 44-46.; see D.09-12-044 at 19 (noting that renewable resource generation is a vital component of California's effort to reduce greenhouse gas emissions).

<sup>24</sup> Projects located on BLM land are identified at <http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/pa/energy/solar.Par.84447.File.dat/BLM%20Solar%20Apps%20and%20Auths.pdf>.

applications that would facilitate the development of renewable generation.<sup>25</sup> The Energy Policy Act of 2005 requires the Secretary of the Interior to have sought to have approved at least 10,000 MW of renewable energy on public lands by 2015.<sup>26</sup> The Proposed Project would support the delivery of renewable energy generation developed on Federal lands consistent with these Federal goals.

### 1.1.9 Support Goals of the California Energy Commission Integrated Energy Policy Report

The development of additional transmission infrastructure to interconnect and deliver renewable resources is also encouraged by the CEC's Integrated Energy Policy Report (IEPR).<sup>27</sup> The IEPR states that achieving the RPS is an essential component of California's GHG emission reduction targets. The report acknowledges that progress toward the RPS goals is largely dependent upon having the ability to interconnect substantial amounts of new renewable generation. Furthermore, the report identifies the lack of transmission infrastructure to access remote renewable resources as the most critical barrier to meeting these goals.<sup>28</sup>

### 1.1.10 Support Desert Renewable Energy Conservation Plan

The importance of facilitating development of renewable generation is supported by the Desert Renewable Energy Conservation Plan (DRECP).<sup>29</sup> The DRECP is expected to provide binding, long-term endangered species permit assurances while facilitating the review and approval of renewable energy projects and transmission lines in the Mojave and Colorado Deserts in California.<sup>30</sup> The Renewable Energy Action Team (REAT), which oversees implementation of the DRECP, consists of the CEC, the California Department of Fish and Wildlife, the U.S. Bureau of Land Management, and the U.S. Fish and Wildlife Service.<sup>31</sup> Other agencies participating in the REAT include the CPUC, CAISO, National Park Service, U.S. Environmental Protection Agency, and the Department of Defense.<sup>32</sup> The DRECP has identified significant potential for renewable generation within the Blythe and Desert Center areas that likely would utilize the WOD transmission upgrades.<sup>33</sup>

The Solar Energy Development Programmatic Environmental Impact Statement (PEIS) established two Solar Energy Zones (SEZ) in California, Riverside East and Imperial

<sup>25</sup> Exec. Order No. 13,212, 66 Fed. Reg. 28,357 (May 18, 2001).

<sup>26</sup> Energy Policy Act of 2005, Pub. L. No. 109-58, § 211, 119 Stat. 595 (2005). <http://www.gpo.gov/fdsys/pkg/PLAW-109publ58/pdf/PLAW-109publ58.pdf>.

<sup>27</sup> CEC, 2011 IEPR Report, <http://www.energy.ca.gov/2011publications/CEC-100-2011-001/CEC-100-2011-001-CMF.pdf>.

<sup>28</sup> *Ibid.* at 38.

<sup>29</sup> Then-Governor Arnold Schwarzenegger ordered the development of the DRECP in November 2008. Exec. Order No. S-14-08 (Nov. 17, 2008).

<sup>30</sup> *Ibid.* ¶ 12.

<sup>31</sup> *Ibid.* ¶ 6.

<sup>32</sup> DRECP, <http://www.drecp.org/about/index.html>.

<sup>33</sup> DRECP, Transmission Impacts in the DRECP (corrected June 11, 2012), [http://www.drecp.org/meetings/2012-04-25-26\\_meeting/background/Transmission\\_Planning/Transmission\\_Technical\\_Group\\_report\\_final\\_4\\_16\\_12.pdf](http://www.drecp.org/meetings/2012-04-25-26_meeting/background/Transmission_Planning/Transmission_Technical_Group_report_final_4_16_12.pdf).

East, which are included in the DRECP report published on December 17, 2012. The DRECP referred to the Riverside East as Cadiz Valley and the Imperial East as Imperial Borrego Valley. As a Development Focus Area<sup>34</sup> (DFA), the DRECP included the Imperial Borrego Valley area in all alternatives and the Cadiz Valley area in four alternatives. Table ES-4 from the DRECP executive summary<sup>35</sup> estimates 3,511 to 9,811 MW could be developed in the Imperial Borrego Valley, and 1,150 to 3,945 MW could be developed in the Cadiz Valley and Chocolate Mountains.

The purpose of the Proposed Project is to provide additional transmission capacity to facilitate the full deliverability of renewable generation and to facilitate additional system reliability. The Proposed Project would increase the system transfer capacity by approximately 3,200 MW, from approximately 1,600 MW to 4,800 MW. Existing generation in this area, as well as a significant portion of the identified future energy in the DRECP report, will flow into Devers Substation where it will then need to be exported west to customers in the utility load centers. The Proposed Project will deliver the power produced in these areas, which accumulates at Devers Substation, to the utility load centers in Southern California.

## 1.2 Project Need

This section describes the need for the Proposed Project.

### 1.2.1 The Proposed Project is Needed to Integrate and Interconnect Generation Resources within the Blythe and Desert Center Areas

As explained in Section 1.1, Project Purpose, SCE is obligated by Federal law and contractual agreements to interconnect and integrate power generation facilities into its electric system and provide for the level of interconnection service requested.

As of May 15, 2013, there were 10 active interconnection requests listed in the CAISO Interconnection Queue for the Blythe and Desert Center areas. These requests account for approximately 2,479.5 MW of new renewable generation interconnections. The CPUC has recognized that the quantity of renewable generator interconnection requests can be an indicator of need for transmission projects serving renewable generation.<sup>36</sup>

The CAISO Cluster Interconnection Studies demonstrate that the existing WOD transmission lines are inadequate to meet the level of service needed by new generation interconnection requests previously identified in Table 1.1, Interconnection Requests for the Blythe and Desert Center Areas. As previously stated, Cluster Interconnection Studies identify the Proposed Project as needed to safely and reliably accommodate the full

---

<sup>34</sup> The term "Development Focus Area" defines the areas within which permitting of renewable energy development would be streamlined under the DRECP.

<sup>35</sup> DRECP, Description and Comparative Evaluation of Draft DRECP Alternatives, p. 10 [http://www.drecp.org/documents/docs/alternatives\\_eval/Executive\\_Summary.pdf](http://www.drecp.org/documents/docs/alternatives_eval/Executive_Summary.pdf).

<sup>36</sup> D.10-12-052 (December 16, 2010) at 27. *See also* D.111-04-034, Order Modifying D.10-12-052 and Denying Rehearing (April 15, 2011), at 4-8 (reinforcing the evidentiary weight of PPAs and interconnection requests to the CAISO-controlled grid to support the need for a proposed transmission project).

deliverability of the projects listed above in Table 1.1, Interconnection Requests for the Blythe and Desert Center Areas.

### **1.2.2 The Proposed Project is Needed to Comply With Executed LGIAs**

Currently, as described above in Table 1.1, Interconnection Requests for the Blythe and Desert Center Areas, three LGIAs (totaling 1,485 MW of new solar generation) have been executed that describe the Proposed Project as the required transmission line delivery project needed to achieve the Full Capacity Deliverability Status requested by the generation facility.<sup>37</sup> The Proposed Project is needed for SCE to comply with the LGIAs and to enable full deliverability of the projects.

### **1.2.3 The Proposed Project is Needed to Support Integration of Generation with Executed PPAs**

Need for the Proposed Project is also demonstrated by executed PPAs for new generation that would utilize the proposed WOD transmission upgrades. As explained above, the CPUC has emphasized that executed PPAs provide a strong indicator of the need for transmission upgrades to support renewable generation.<sup>38</sup>

Currently, as described above in Table 1.1, Interconnection Requests for the Blythe and Desert Center Areas, SCE and other electric utilities have entered into multiple PPAs to deliver 1000 MW of new solar energy generation that would utilize the transmission upgrades planned as part of the Proposed Project. SCE and other electric utilities are currently in negotiations for additional PPAs with generation sources in the Blythe and Desert Center areas. Based on the large volume of interconnection requests in those areas, SCE anticipates that additional PPAs would be executed and submitted for approval to the appropriate agencies. The Proposed Project would support integration of generation facilities with executed PPAs and help SCE and other utilities satisfy obligations under those PPAs.

### **1.2.4 The Proposed Project is Needed to Facilitate Integration of Renewable Generation Resource Being Developed in the Coachella Valley Area**

On May 18, 2011, the CAISO approved a separate joint transmission line upgrade project between SCE and the Imperial Irrigation District (IID) to expand the transmission capability in the Coachella Valley between the SCE-owned transmission system and the IID-owned transmission system. The intertie between these two systems is known as Path 42. This Path 42 Upgrade Project would improve transmission facilities between the Devers and Coachella Valley substations, in addition to transmission facilities between

<sup>37</sup> CAISO Queue # 193, LGIA filed on August 24, 2011, Docket No. ER11-4358-000; CAISO Queue # 294, LGIA filed on December 8, 2010, Docket No. ER11-2318-000; CAISO Queue # 365, LGIA filed on December 21, 2010, Docket No. ER11-2455-000.

<sup>38</sup> D.10-12-052 at 27.

the Mirage and Ramon substations. This upgrade to Path 42 would increase the transmission capability between SCE and IID transmission systems by an additional 900 MW to enable delivery of geothermal and solar resources located in the Coachella Valley area. The Path 42 Upgrade Project would contribute to meeting the RPS goals.

The Proposed Project has been identified by the CAISO as a required upgrade to facilitate the increased power flows that would result from the Path 42 Upgrade Project, which is intended to deliver new renewable generation resources located in the Coachella Valley area.<sup>39</sup>

As of October 2013, there are 11 active projects in the Coachella Valley area totaling approximately 1,090 MW that would utilize the capacity increase in Path 42 and therefore would utilize the increased transmission capacity provided by the Proposed Project.

### **1.2.5 The Proposed Project is Needed to Comply with Reliability Standards**

The Proposed Project is needed to deliver energy from generation resources located in the Blythe and the Desert Center areas in compliance with the Reliability Standards and the Regional Business Practice developed by NERC and WECC. Transmission lines must be planned in accordance with Reliability Standards and the Regional Business Practice developed by the NERC, WECC, CAISO, and the individual utility. Without construction of the Proposed Project, the existing WOD facilities would not be able to remain in compliance with these Reliability Standards following the addition of new generation resources being developed in the Blythe and Desert Center areas.

### **1.2.6 The Proposed Project Facilitates Progress Toward California's RPS Goals**

The Proposed Project would increase transmission capability in the Blythe and Desert Center areas, which have been identified by State and Federal agencies as having significant potential for the generation of renewable resources.<sup>40</sup> Without the Proposed Project, capacity constraints with the existing WOD transmission lines substantially limit SCE's ability to deliver electricity from these renewable-rich areas.<sup>41</sup> As a result, the

---

<sup>39</sup> <http://www.caiso.com/Documents/BoardApproved2012-2013TransmissionPlan.pdf> at 129.

<sup>40</sup> See RETI Phase 2B Maps, Proposed Competitive Renewable Energy Zones, [http://www.energy.ca.gov/reti/documents/phase2B/CA\\_CREZ\\_Conceptual\\_Transmission\\_Segments\\_Phase\\_2B\\_final.pdf](http://www.energy.ca.gov/reti/documents/phase2B/CA_CREZ_Conceptual_Transmission_Segments_Phase_2B_final.pdf); RETI Phase 2A Final Report (2009), <http://www.energy.ca.gov/2009publications/RETI-1000-2009-001/RETI-1000-2009-001-F-REV2.PDF>; Renewable Energy Action Team (REAT) Starting-Point Map Narrative, March 23, 2010, [http://www.drecp.org/maps/Starting\\_Point\\_Maps.pdf](http://www.drecp.org/maps/Starting_Point_Maps.pdf); DRECP, Transmission Impacts in the DRECP (corrected June 11, 2012), [http://www.drecp.org/meetings/2012-04-25-26\\_meeting/background/Transmission\\_Planning/Transmission\\_Technical\\_Group\\_report\\_final\\_4\\_16\\_12.pdf](http://www.drecp.org/meetings/2012-04-25-26_meeting/background/Transmission_Planning/Transmission_Technical_Group_report_final_4_16_12.pdf); U.S. Department of Energy, Energy Efficiency and Renewable Energy Program and the U.S. Department of the Interior, Bureau of Land Management, Final Solar Energy Development Programmatic Environmental Impact Statement, Volume 2 <http://solareis.anl.gov/documents/fpeis/index.cfm>; Draft Solar Energy Development Programmatic Environmental Impact Statement: Riverside East SEZ Analysis, <http://solareis.anl.gov/sez/riverside-east/index.cfm>.

<sup>41</sup> See Section 1.1 *supra*.

Proposed Project has been identified by California energy agencies as a critical transmission upgrade needed to facilitate progress toward California's RPS goals.<sup>42</sup>

As described above, the Proposed Project is needed to provide full deliverability of the renewable generation projects described above in Table 1.1, Interconnection Requests for the Blythe and Desert Center Areas, which are located within the Blythe and Desert Center areas. The renewable generation from these projects would facilitate progress by SCE and other utilities toward meeting the RPS goals.<sup>43</sup>

### 1.3 Project Objectives

SCE has identified the following basic objectives for the Proposed Project:

1. Allow SCE to meet its obligation to integrate and fully deliver the output of new generation projects located in the Blythe and Desert Center areas that have requested to interconnect to the electrical transmission grid.
2. Consistent with prudent transmission planning, maximize the use of existing transmission line rights-of-way to the extent practicable.
3. Meet project need while minimizing environmental impacts.
4. Facilitate progress toward achieving California's RPS goals in a timely and cost-effective manner by SCE and other California utilities.
5. Comply with applicable Reliability Standards and Regional Business Practice developed by NERC, WECC, and the CAISO; and design and construct the project in conformance with SCE's approved engineering, design, and construction standards for substation, transmission, subtransmission, and distribution system projects.
6. Construct facilities in a timely and cost-effective manner by minimizing service interruptions to the extent practicable.

<sup>42</sup> CEC, Renewable Power In California: Status And Issues, Publication No. CEC-150-2011-002-LCF-REV1, December 2011, <http://www.energy.ca.gov/2011publications/CEC-150-2011-002/CEC-150-2011-002-LCF-REV1.pdf>, at 83-84 and at F-4; CPUC, 33% Renewables Portfolio Standard Implementation Analysis Preliminary Results, June 2009, <http://www.cpuc.ca.gov/NR/rdonlyres/1865C207-FEB5-43CF-99EB-A212B78467F6/0/33PercentRPSImplementationAnalysisInterimReport.pdf> at 34; RETI Phase 2A Final Report (2009), <http://www.energy.ca.gov/2009publications/RETI-1000-2009-001/RETI-1000-2009-001-F-REV2.PDF>, at 3-95; *see also* D.10-12-052 at 27 ("it is often the case that transmission must be planned and permitted before generation fully commits to an area ... generation developers, and by extension, their financial backers, need assurance that if generation is built, their projects will be able to bring their energy to market").

<sup>43</sup> CEC, Renewable Power In California: Status And Issues, Publication No. CEC-150-2011-002-LCF-REV1, December 2011, <http://www.energy.ca.gov/2011publications/CEC-150-2011-002/CEC-150-2011-002-LCF-REV1.pdf>, at Chapters 3-4; CPUC, 33% Renewables Portfolio Standard Implementation Analysis Preliminary Results, June 2009, <http://www.cpuc.ca.gov/NR/rdonlyres/1865C207-FEB5-43CF-99EB-A212B78467F6/0/33PercentRPSImplementationAnalysisInterimReport.pdf> at 34, 46.

**This Page Intentionally Left Blank**