

1. Introduction

On May 28, 2009, Southern California Edison (SCE, or the applicant) submitted an application (A.09-05-027) to the California Public Utilities Commission (CPUC) for a Certificate of Public Convenience and Necessity (CPCN) to construct and operate the Eldorado–Ivanpah Transmission Project (EITP, or the proposed project). Because the project would be located primarily on lands managed by the U.S. Department of the Interior (DOI) Bureau of Land Management (BLM), the applicant also filed a right-of-way (ROW) application with the BLM for a grant pursuant to Title V of the Federal Land Policy and Management Act. In compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act of 1969 (NEPA), as amended, the CPUC and the BLM have prepared this Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) to provide to both agencies' decision-makers and the public detailed information about the environmental impacts of the project, reasonable alternatives to the project, and ways to mitigate or avoid the project's adverse environmental impacts. The CPUC determined that an EIR would be required under CEQA due to anticipated significant impacts; the BLM determined that an EIS would be an appropriate level of analysis since it was not able to determine without additional evaluation whether the environmental impacts would be significant under NEPA.

This EIR/EIS describes and evaluates the environmental impacts that are expected to result from construction and operation of the applicant's proposed EITP, and presents recommended mitigation measures that, if adopted, would avoid or minimize many of the significant environmental impacts identified. In accordance with CEQA and NEPA requirements, this EIR/EIS also identifies alternatives to the proposed project (including the No Project Alternative) that could avoid or minimize significant environmental impacts associated with the project as proposed by the applicant and evaluates the environmental impacts associated with these alternatives. Specifically, the information contained in this EIR/EIS will be considered by the BLM and the CPUC in their respective deliberations on potential approval of the ROW grant and the CPCN. This EIR/EIS may also be considered by other applicable permitting agencies.

1.1 Overview of the Core Proposed Project, Alternatives, and the Whole of the Action / Cumulative Action

1.1.1 The Core Proposed Project Evaluated Under CEQA/NEPA

This section presents an overview of the project, as proposed by the applicant, and all alternatives considered in this EIR/EIS, including the No Project Alternative. The core project includes the transmission upgrades and associated transmission infrastructure and the alternatives included in the application submitted by SCE to the CPUC and the BLM. This document also includes information on related projects, or "the whole of the action / cumulative action," as described below in Section 1.1.2. A complete description of the project and its alternatives is given in Chapter 2. Figure 1-1 depicts the proposed project and its alternatives. The proposed project would include the following components:

- **Powerlines**
 - **Eldorado–Ivanpah Transmission Line**
 - **Subtransmission Line**
 - **Distribution Line**
- **Substations**
 - **New Ivanpah Substation**
 - **Eldorado Substation Upgrades**

1 • **Telecommunication System**
2

3 Alternatives to the proposed project were developed in accordance with CEQA and NEPA requirements. Before filing
4 the application, the applicant consulted with both the CPUC and the BLM through a pre-filing process, and a number
5 of alternatives were developed at that time. Additionally, the CPUC and the BLM performed an independent and
6 thorough review of all the information submitted with the application to develop an exhaustive list of reasonable
7 alternatives and alternatives that would reduce one or more significant impacts. This process included a review of
8 surveys, studies, and applicable planning documents for the region and a meeting with the California Independent
9 System Operator (CAISO) on September 28, 2009, to discuss reliability standards and transmission system planning.
10

11 Alternatives to the proposed project include transmission line routing alternatives and telecommunications
12 alternatives, as depicted in Figure 1-1. A number of additional alternatives were considered early in the
13 environmental review process but were eliminated from further consideration based on a preliminary analysis of both
14 system alternatives and technology alternatives. Alternatives carried forward are considered in an equivalent level of
15 detail and with an equivalent level of analysis.
16

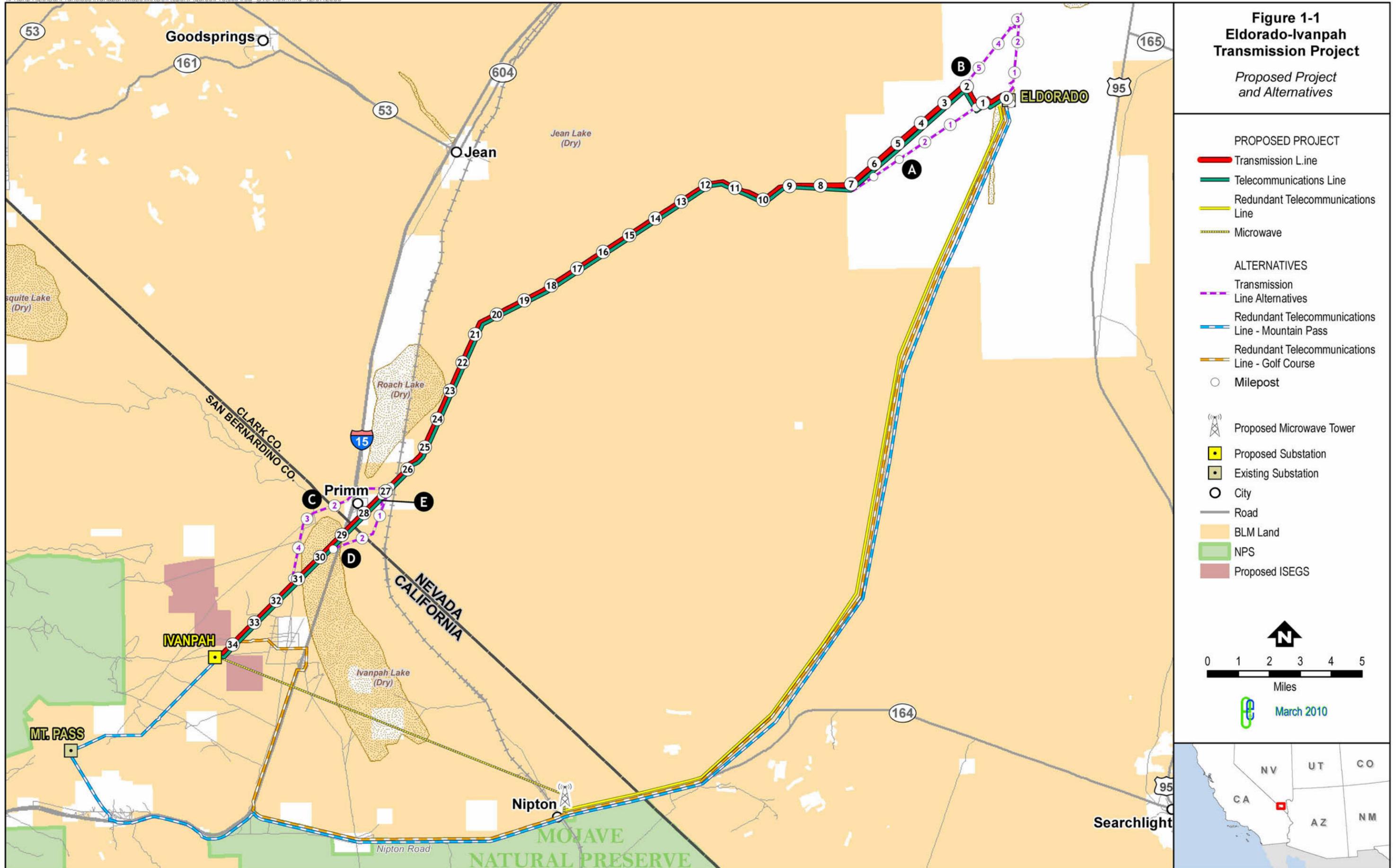
17 In addition to the proposed project, as described above, the alternatives carried forward for analysis in this document
18 include the following:
19

- 20 • **Parallel to Los Angeles Department of Water and Power (LADWP) Corridor Alternative**
21 **(Transmission Alternative A)**
- 22 • **North of Eldorado Alternative (Transmission Alternative B)**
- 23 • **North Dry Lakes Reroute Alternative (Transmission Alternative C)**
- 24 • **South Dry Lakes Reroute Alternative (Transmission Alternative D)**
- 25 • **South Dry Lakes Bypass Alternative (Transmission Subalternative E)**
- 26 • **Golf Course Telecommunication Alternative**
- 27 • **Mountain Pass Telecommunication Alternative**
28

29 Other alternatives were considered but eliminated from further consideration based on a preliminary analysis of
30 potential environmental impacts, feasibility, and ability to meet the basic project objectives outlined below in Section
31 1.2.4. These alternatives and the rationale for their elimination are discussed in detail in Appendix A-1, Alternatives
32 Screening Report.
33

34 **1.1.2 Additional Projects Considered in this EIR/EIS**
35

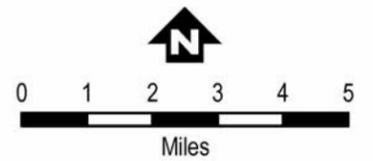
36 Under both CEQA and NEPA, the lead agency must assess all environmental impacts that would occur as a result of
37 the proposed project or action; both CEQA and NEPA stipulate that this assessment is not limited only to the project
38 components as defined in a single permit application. As described below in Section 1.2, the EITP would facilitate the
39 interconnection of renewable generation sources into the California grid in compliance with California's Renewables
40 Portfolio Standard (RPS). In the interest of full disclosure and to allow agency decision-makers to reach an informed
41 decision on whether to permit the EITP, information on the environmental effects of related renewable generation
42 projects is included in this document.
43
44



**Figure 1-1
Eldorado-Ivanpah
Transmission Project**

*Proposed Project
and Alternatives*

- PROPOSED PROJECT**
- Transmission Line
 - Telecommunications Line
 - Redundant Telecommunications Line
 - Microwave
- ALTERNATIVES**
- - - Transmission Line Alternatives
 - - - Redundant Telecommunications Line - Mountain Pass
 - - - Redundant Telecommunications Line - Golf Course
 - Milepost
 - Proposed Microwave Tower
 - Proposed Substation
 - Existing Substation
 - City
 - Road
 - BLM Land
 - NPS
 - Proposed ISEGS



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1 However, because many of the renewable generation projects in the Ivanpah Valley Area are being developed,
 2 applied for, and analyzed under CEQA and/or NEPA concurrently with the proposed EITP, their status and the level
 3 of publicly available information varies. For this reason, the level of detail and the consideration under CEQA and
 4 NEPA varies in this document. The Ivanpah Solar Electric Generating System (ISEGS) project is discussed in
 5 Chapters 2 and 3 of this document as part of the “whole of the action” under CEQA and as a “cumulative action”
 6 under NEPA. The ISEGS project is discussed because of geographical proximity and the overlapping schedules of
 7 the ISEGS project and EITP, and because of contractual terms within signed agreements between the applicant and
 8 BrightSource Energy, Inc. (BrightSource) the solar developer for ISEGS, and the EITP applicant and another electric
 9 service provider. Background information on CEQA and NEPA requirements and on the CPUC and BLM
 10 determination that ISEGS constitutes part of the “whole of the action” and a “cumulative action,” respectively, is
 11 provided below.

12
 13 Other renewable generation projects planned in the Ivanpah Valley Area would likely connect to the EITP as well,
 14 including the projects listed in Table 1-1. Unlike the ISEGS project, these projects are not considered part of the
 15 whole of the action under CEQA or as a cumulative action under NEPA due to their speculative nature, the lack of
 16 publicly available information on their environmental effects, and the lack of a signed Power Purchase Agreement
 17 (PPA) with any electric service provider as of December 31, 2009. These projects are instead discussed in Chapter
 18 5: Cumulative Scenario and Impacts.

Table 1-1 Ivanpah Dry Lake Area New Generation Interconnection Requests

CAISO Queue Position	Type	Size (MW)	Area of Interconnection ¹
CAISO Queue #126	Wind	1,500	Eldorado Substation
CAISO Queue #233	Solar Thermal	200	Ivanpah Substation 230-kV
Total Continuing Under LGIP Serial Approach		1,700	
CAISO Queue # 205	Solar Thermal	300	Eldorado 220-kV Switchyard
CAISO Queue #467	Solar Thermal	230	Eldorado–Ivanpah 230-kV Line
CAISO Queue #488	Solar Thermal	92	Eldorado Substation 230-kV
CAISO Queue #497	Solar Thermal	6	New Ivanpah Substation 115-kV
CAISO Queue #498	Solar Thermal	20	New Ivanpah Substation 115-kV
CAISO Queue #499	Solar Thermal	40	New Ivanpah Substation 115-kV
CAISO Queue #500	Solar Thermal	960	Eldorado Substation 500-kV
CAISO Queue #502	Solar Photovoltaic	270	Eldorado–Ivanpah 230-kV Line
CAISO Queue #503	Solar Photovoltaic	500	Eldorado–Ivanpah 230-kV Bus
Total Continuing Under Transitional Queue Cluster Approach		2,418	
Grand Total Interconnection Requests		4,118	

Source: CAISO 2010.

Notes:

¹Area of interconnection is identified by the developer as part of the interconnection request. Inconsistencies in naming conventions for substations and transmission lines reflect differences in naming conventions between developers.

Key:

CAISO = California Independent System Operator

kV = kilovolt

MW = megawatt

1.1.2.1 CEQA Whole of the Action

Under CEQA, a “project” is defined as “the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment” (CEQA Guidelines 15378(a)). The CEQA Guidelines also state that the “project” may require several discretionary approvals

1 by governmental agencies and that each separate governmental approval does not necessarily constitute a separate
2 project (CEQA Guidelines 15378(c)).
3

4 As discussed below in Section 1.2, the objective for the proposed project is to connect renewable generation sources
5 in the Ivanpah Valley region to the existing electrical transmission grid and to enable SCE to comply with California's
6 RPS. In the vicinity of the proposed Ivanpah substation there are three phases of one renewable generation project,
7 all part of the ISEGS, under review by the BLM and the California Energy Commission (CEC) under Docket 07-AFC-
8 05. The ISEGS applicant, BrightSource, has executed PPAs with SCE and Pacific Gas and Electric (PG&E) to
9 connect to the EITP. Based on the timing and language of the signed PPAs, and the published Final Staff
10 Assessment/Draft Environmental Impact Statement (FSA/DEIS) for the ISEGS project (CEC and BLM 2009), the
11 CPUC has determined that ISEGS constitutes a reasonably foreseeable physical change in the environment and
12 should be analyzed for the EITP as part of the "whole of the action" under CEQA.
13

14 **1.1.2.2 NEPA Cumulative Action** 15

16 Under NEPA, related actions can be considered in an environmental document as "connected," "cumulative," or
17 "similar" actions. NEPA regulation requires that the federal agency consider the proposed action and other
18 "connected" or "cumulative" actions in the same EIS (40 CFR 1508.25). An agency may, but is not required to,
19 consider other "similar" actions in the same environmental document.
20

21 "Connected" actions are closely related. Actions are connected if they (1) automatically trigger other actions that may
22 require environmental impact statements, (2) cannot or will not proceed unless other actions are taken beforehand or
23 simultaneously, or (3) are interdependent parts of a larger action and depend on the larger action for their
24 justification. "Cumulative" actions have cumulatively significant impacts when viewed with other proposed actions.
25 "Similar" actions have similarities, such as common timing or geography, with other reasonably foreseeable or
26 proposed agency actions. These similarities provide a basis for evaluating the actions' environmental consequences
27 together. An agency may analyze "similar" actions in the same EIS, and should do so when it is the best way to
28 adequately assess the actions' combined impacts.
29

30 The BLM has determined that the ISEGS project constitutes a "cumulative" action for the EITP EIR/EIS. Reasons for
31 declining to define ISEGS as a "connected" or "similar" action are given below, followed by reasons for defining
32 ISEGS as a "cumulative" action.
33

34 The BLM has determined that the ISEGS project and the EITP are not "connected" actions because it is not the case
35 that each depends on the other. While the ISEGS project at full build-out would depend on the EITP because the
36 existing transmission line (without the EITP proposed line and substation upgrades) would provide insufficient
37 transmission capacity for the power generated by all phases of the ISEGS project, the EITP would not depend on the
38 ISEGS project. BLM has received a number of applications for additional power generation projects in both California
39 and Nevada that could tie into the EITP, including those listed in Table 1-1, below. Therefore, the EITP is needed for
40 planned renewable development in the Ivanpah Valley area even if the ISEGS project is not constructed.
41

42 The BLM has also determined that the ISEGS project is not "similar" to the EITP, for several reasons. First, the EITP
43 EIS addresses transmission and its effects, and the ISEGS EIS addresses power generation and its effects. Second,
44 while the two projects would be close to each other geographically, their timing would not be the same (although it
45 could overlap). Third, the projects are in different phases of review. The ISEGS project is supported by an FSA/DEIS,
46 prepared jointly by the CEC and the BLM. For FSAs in general, the CEC prepares a CEQA equivalent document that
47 involves taking staff testimony and public comments before ultimate decision-making by the CEC. As of December
48 31, 2009, the ISEGS FSA/DEIS had been published and the process of taking staff testimony and public comments
49 had begun. In contrast, no information had been published until now for the EITP; this EIS is the first publicly
50 available information on the environmental effects of the EITP. Fourth, the EITP is under the jurisdiction of a separate

1 and distinct state agency (the CPUC, as opposed to the CEC for the ISEGS project). Fifth, the BLM will make distinct
2 federal ROW decisions for each of the projects; if issued, the ROW grants will be to separate applicants.

3
4 As stated above, under the circumstances presented, the BLM has determined that the ISEGS proposal qualifies as
5 a cumulative action to the proposed EITP. The ISEGS FSA/DEIS indicates that the ISEGS project would result in
6 significant impacts. Given the proximity in location and the overlapping schedules of the EITP and the ISEGS project,
7 it is reasonable to assume that the EITP, when considered in combination with ISEGS, would contribute to
8 cumulatively significant impacts. A cumulative action differs from a cumulative impact in that it is considered to be
9 part of the scope of the action; pursuant to U.S. Council on Environmental Quality (CEQ) regulation (40 CFR
10 1508.25(a)(2)), the ISEGS project will be discussed as part of the action within this EIS. Based on the existence of
11 specific contractual terms within three signed PPA and the quantity and quality of information available on the ISEGS
12 project, the CPUC and the BLM determined that the EITP will be discussed in this document as part of the Whole of
13 the Action (pursuant to CEQA) and as a cumulative action (pursuant to NEPA).

15 **1.1.2.3 Incorporation by Reference of the ISEGS FSA/DEIS**

16
17 CEQA Guidelines 15150(a) state that an EIR “may incorporate by reference all portions of another document which is
18 a matter of public record and which is generally available to the public.” Similarly, under NEPA, CEQ regulations
19 (1502.21) direct agencies to incorporate material into an EIS by reference “when the effect will be to cut down on bulk
20 without impeding agency and public review of the action.” These CEQ regulations specify that “the incorporated
21 material shall be cited in the statement and its content briefly described.” Because ISEGS is already undergoing
22 environmental review with the CEC and the BLM, this EIR/EIS will not reevaluate the environmental impacts of the
23 ISEGS project. Rather, this EIR/EIS will summarize the findings of the ISEGS FSA/DEIS. However, in the interest of
24 fully disclosing the environmental impacts of the “Whole of the Action / Cumulative Action,” this document assesses
25 not only the effects of the EITP but the effects of the EITP combined with the effects of the ISEGS project. Therefore,
26 all the potential effects of the EITP, the ISEGS project, and the combined effects of the two projects will be disclosed;
27 the public and the agencies will be informed, and the agencies will be assisted in making their decisions using the
28 best information available.

29
30 A complete description of the ISEGS project components, location, and construction is included in the “Whole of the
31 Action / Cumulative Action” subsection of Chapter 2, “Project Description.” This information reflects the original
32 ISEGS project layout for which BrightSource applied; subsequent revisions included a reduced project footprint and
33 layout alternative. This document takes the more conservative approach of including the larger project footprint in an
34 effort to disclose the greatest possible environmental effects of the ISEGS project. Information on the environmental
35 setting (baseline), applicable regulations, and environmental impacts of ISEGS are discussed under the “Whole of
36 the Action / Cumulative Action” subsection for each resource evaluated in Chapter 3, “Affected Environment /
37 Environmental Impacts.”

39 **1.2 Purpose, Need, and Objectives**

40
41 This section discusses the purpose, need, and objectives of the proposed project as required for CEQA and NEPA
42 documents to facilitate an analysis of reasonable alternatives. CEQA and the CEQA Guidelines require a clearly
43 written statement of objectives to guide the lead agency in developing a reasonable range of alternatives and aid
44 decision-makers in preparing findings or a statement of overriding considerations. CEQA specifies that the statement
45 of objectives should include the underlying purpose of the project (Section 15126.6(a)). NEPA guidance published by
46 the CEQ states that the purpose and need “shall briefly specify the underlying purpose and need to which the agency
47 is responding in proposing the alternatives, including the proposed action” (40 CFR §1502.13).

1.2.1 Applicant’s Objectives

Under Sections 210 and 212 of the Federal Power Act (16 United States Code [USC] § (i) and (k)) and Sections 3.2 and 5.7 of CAISO’s Tariff, the applicant is obligated to interconnect and integrate power generation facilities into its electric transmission system. This requirement includes renewable power in addition to traditional generation sources.

As stated by the applicant, the purpose of the proposed project is to interconnect and deliver up to 1,400 megawatts (MW) of solar energy that is expected to be developed at the Ivanpah Valley area. The existing Eldorado substation and regional transmission lines cannot accommodate the additional power that would be generated by the anticipated solar projects in the Ivanpah Valley. The applicant has proposed to construct the EITP to connect planned renewable energy sources to the CAISO-controlled transmission grid. The CAISO plans and approves transmission interconnections and maintains an Interconnection Request Queue of generation projects that have requested access to the transmission grid. The EITP would also improve line reliability such that it would comply with North American Electric Reliability Corporation (NERC) standards.

The applicant identified the following additional objectives for the project in the Proponent’s Environmental Assessment (PEA):

1. Reliably interconnect new solar generation resources in the Ivanpah Valley area and help the applicant and other California utilities comply with California’s RPS in an expedited manner
2. Comply with all applicable reliability planning criteria required by NERC, the Western Electricity Coordinating Council (WECC), and the CAISO
3. Construct facilities in an orderly, rational, and cost-effective manner to maintain reliable electric service by minimizing service interruptions during construction
4. Maximize the use of existing transmission line ROWs to minimize effects on previously undisturbed land and resources
5. Minimize environmental impacts through selection of routes, tower types, and locations
6. Where existing ROW is not available, use the shortest feasible route that minimizes environmental impacts
7. Meet project needs in a cost-effective and timely manner

Table 1-1 lists the planned solar and wind energy projects in the Ivanpah Valley area by position in the CAISO queue. Projects in the CAISO queue have requested to connect to the CAISO-controlled electric grid; for each of these projects, the CAISO conducts an interconnection study, which includes analyses of issues such as short circuit/fault duty, steady state (thermal and voltage), and stability (CAISO 2008). CAISO is transitioning to a new interconnection review and approval process. Interconnection requests filed prior to June 2, 2008, are processed according to the Large Generator Interconnection Procedures (LGIP) serial study process; interconnection requests filed after that date must be submitted during one of two annual Queue Cluster Windows. Table 1-1 includes projects under the traditional sequential process as well as projects included under the cluster queue process.

1.2.2 Background Information

As noted above, the purpose of the proposed EITP is to reliably interconnect new solar generation sources in the Ivanpah Valley area in compliance with California’s RPS. To allow for a better understanding of the purpose and objectives of the EITP, the following discussion provides background information on the RPS and renewable generation development, SCE’s obligation to provide transmission capacity for renewable energy sources, and needed improvements to SCE’s transmission system.

California Renewables Portfolio Standard

Senate Bill 1078, passed in 2002, established the California RPS, which requires utilities such as the applicant to increase sales of electricity produced by renewable energy sources including solar facilities by a minimum of 1 percent per year, with a goal of 20 percent of total sales by the year 2017. However, the CPUC, the CEC, and the California Power Authority adopted the Energy Action Plan (EAP), which pledged that the agencies would meet an accelerated goal of 20 percent by the year 2010. As a result, the California Senate passed Senate Bill 107 to be consistent with the EAP, and accelerated the implementation of the RPS, requiring utilities to meet the goal of 20 percent renewable energy generation by 2010. The Ivanpah Valley area has been identified as having high potential for solar resource development. The proposed project would allow the applicant to increase its percentage of renewable resources in its energy portfolio and aid the State of California in reaching the goals of the RPS.

Currently, CPUC jurisdictional load-serving entities, including SCE, obtain approximately 13.7 percent of their delivered energy from renewable resources [“load” is electricity demand]. The CPUC has approved PPAs totaling over 7,000 MW, primarily new generation facilities in the CAISO interconnection queue. With the addition of 7,000 MW of renewable generation, CPUC jurisdictional entities would achieve the 20 percent RPS target (CAISO 2009).

California Integrated Energy Policy Report

According to the CEC 2008 Integrated Energy Policy Report (IEPR) Update, the Consortium for Electric Reliability Technology Solutions/Electric Power Group (CERTS/EPG) presented the results of a study on transmission and operations issues related to renewable integration to the IEPR staff at a July 23, 2008, workshop. In their presentation, CERTS/EPG reported that California must integrate 20,000 MW of new renewable energy to meet the statewide 33 percent renewables target by 2020. By 2030, this amount would expand to 23,000 MW, since the overall demand for energy is expected to continue to grow (CEC 2008).

Renewable Energy Transmission Initiative Report

The Renewable Energy Transmission Initiative (RETI) report identifies a conceptual statewide transmission grid, as well as renewable energy zones both within and outside of California, with the goal of expediting development and approval of transmission infrastructure for renewable energy. The RETI report was prepared by a committee composed of the CPUC, the CEC, the CAISO, and publicly owned utilities (CPUC et al. 2009).

The report establishes and ranks California Renewable Energy Zones (CREZs) based on a combination of factors, including generation potential, permitting feasibility, interconnection points into the grid, and the cost of generation and transmission. Phase 2 of the report, published in September 2009, evaluates potential renewable energy generation from outside California, including Nevada (CPUC 2009). The EITP would be located in the Mountain Pass CREZ.

Executive Order 13212

Executive Order 13212, dated May 18, 2001, mandates that agencies act expediently and in a manner consistent with applicable laws to increase the “production and transmission of energy in a safe and environmentally sound manner.”

Energy Policy Act of 2005

The federal Energy Policy Act (EPAct) of 2005 requires the DOI, the BLM’s parent agency, to approve at least 10,000 MW of renewable energy on public lands by 2015. Currently, proposed renewable energy projects amounting to 1,900 MW of electricity are on file with the BLM for the Ivanpah Valley area. Many of these are noted in Table 1-1. The EITP would allow for the transmission and distribution of energy from these renewable generation facilities. Based on the federal policies noted above, the BLM is obligated to consider the EITP proposal expeditiously to accommodate the potential increase in power generation that, if approved, would come on line after 2010.

1
2 **Section 368 of the Energy Policy Act**

3 Section 368 of the EPAct requires the DOI, in conjunction with the departments of agriculture (USDA), energy (DOE),
4 commerce (DOC), and defense (DOD), to designate pipeline and electric transmission corridors for the 11 contiguous
5 western states and establish procedures to expedite the review of projects that would be located within established
6 energy corridors. Section 368 specifically notes the need for upgraded and expanded electric transmission
7 infrastructure in the western United States to improve reliability, relieve congestion, and improve the capacity of
8 nationwide electric transmission.

9
10 In response to Section 368 of the EPAct, the BLM and the DOE prepared the West-wide Energy Corridor
11 Programmatic Environmental Impact Statement (WWEC PEIS) with the USDA, Forest Service, DOD, and the U.S.
12 Fish and Wildlife Service (USFWS) participating as cooperating agencies (BLM and DOE 2009). The report
13 establishes energy corridors on public lands in the western United States and serves as an amendment to existing
14 management plans, including the California Desert Conservation Area (CDCA) Plan (BLM 1980) and the Las Vegas
15 Resource Management Plan (RMP; BLM 1988). Corridors established by the WWEC PEIS were developed by
16 federal agency staff and informed by the comments and suggestions of the public. The corridors met specific criteria,
17 including location on federal lands, ability to establish connectivity with the energy grid, feasibility, legal and
18 regulatory compliance, and compatibility with local BLM land use plans.

19
20 The Final WWEC PEIS reviewed a number of documents to establish the need for expansion of and improvements to
21 the existing western electricity grid and to discuss the particular difficulties of reliably meeting the increasing
22 electricity demands in the western United States. The WWEC PEIS cited the Western Governor’s Association in
23 recognizing that supply centers in the western United States are often located far from load centers (such as cities)
24 and in discussing the difficulty of transmission planning when multiple agencies and/or states are involved. The
25 difficulty of planning and permitting long-distance transmission was also discussed in the North American Electricity
26 Reliability Corporation (NERC) forecasts, which highlighted the deficiencies of the existing transmission
27 infrastructure, particularly in constrained areas such as California, and stressed that the need for long-distance
28 transmission is of particular importance for renewable energy resources and for California’s ability to meet its RPS
29 (discussed above in Section 1.2.2). The WWEC PEIS also cited the DOE’s National Electric Transmission
30 Congestion Study, which was prepared in response to Section 1221(a) of the EPAct and analyzed the transmission
31 grid to determine locations where reliability and capacity were being impacted by congestion. The report cited several
32 factors as contributing to congestion, including increased energy demands and lack of planning and investment in the
33 transmission grid over the past decade. The only critical congestion area in the western United States identified by
34 the DOE study was southern California (DOE 2006).

35
36 **Secretarial Order 3285**

37 Secretarial Order 3285, issued by the Secretary of the Interior on March 11, 2009, establishes the policy of
38 “encouraging the production, development, and delivery of renewable energy” as one of the DOI’s “highest priorities.”

39
40 **1.2.3 State Purpose and Need**

41
42 Pursuant to Article XII of the Constitution of the State of California, the CPUC is charged with regulation of investor-
43 owned public utilities, including SCE. The CPUC is the lead state agency for CEQA compliance in evaluating the
44 project and is responsible for issuing a decision on the applicant’s CPCN application. The purpose of this EIR is to
45 disclose any environmental impacts associated with the proposed project and its alternatives and to assist the
46 agency in determining whether to issue a CPCN for the EITP.

47
48 The need for the proposed project is driven by state requirements for the interconnection and distribution of
49 renewable energy. The CEC has identified lack of transmission infrastructure as a barrier to accessing remote
50 renewable energy resources (CEC 2007).

1.2.4 Federal Purpose and Need

The BLM's purpose and need for the EITP is to respond to SCE's application under Title V of the Federal Land Policy and Management Act (FLPMA; 43 USC 1761) for a ROW grant to construct, operate and decommission a 230-kilovolt (kV) transmission line, substation, and associated infrastructure in compliance with FLPMA, BLM ROW regulations, and other applicable federal laws. The BLM will decide whether to approve, approve with modification, or deny issuance of a ROW grant to SCE for the proposed EITP. The decision the BLM will make is whether or not to grant a ROW, and if so, under what terms and conditions.

Land Use Plan Conformance

The majority of the EITP would be located on federal land managed by the BLM. All actions approved or authorized by the BLM must conform to the existing land use plan where one exists (43 CFR 1610.5-3, 516 DM 11.5). The land use plans applicable to the project are the BLM CDCA Plan of 1980, as amended, and the Las Vegas RMP of 1998, as amended.

The EITP would be in conformance with both applicable BLM land use plans. The CDCA Plan includes an Energy Production and Utility Corridor Element, which designates a regional network of utility planning corridors. Within California, the proposed project would replace an existing ROW within established energy corridors that allow for electrical transmission of 161-kV and above. The project is in conformance with the Las Vegas RMP Record of Decision as it states that all public lands within the planning area, except as stated in RW-1-c through RW-1-g, are available at the discretion of the agency for ROWs under the authority of the Federal Land Policy Management Act. The location of the proposed project in relation to established energy corridors is shown in Figure 1-2.

Because the transmission systems are an allowable use of the land in established energy corridors, the proposed project does not conflict with any applicable land use plans. Additionally, as described above, the proposed project would be in conformance with WWEC PEIS, which amended the CDCA Plan and the Las Vegas RMP.

Other Agency Plans. For portions of the proposed project or its alternatives that would be located on land managed by local agencies, all applicable plans, policies, and regulations are discussed in Section 3.9, "Land Use," of this document, as well as within other resource sections, as applicable.

1.2.5 Joint State and Federal Objectives

Based on the content of the PEA and related federal and state objectives, the CPUC and the BLM have abridged the objectives for the proposed project to the following:

1. To connect renewable energy sources in the Ivanpah Valley area in compliance with Executive Order 13212, EPA Act, the Federal Power Act, California Senate Bill 1078, and California Senate Bill 107;
2. To improve reliability in compliance with applicable standards, including NERC, WECC, CAISO, and SCE standards; and
3. To maximize the use of existing ROW and designated utility corridors to minimize impacts on environmental resources.

1.3 Other Agency Use of the EIR/EIS

Several other agencies will rely on information in this environmental document to inform them in their decisions regarding issuance of specific permits related to project construction or operation. On the state level, agencies such as the California and Nevada Departments of Transportation, California Department of Fish and Game (CDFG), the

1 Nevada Division of Wildlife, Regional Water Quality Control Boards, the Department of Conservation and National
2 Resources, and the California and Nevada Offices of Historic Preservation will be involved in reviewing and/or
3 approving the proposed project. In addition to the BLM, federal agencies with potential reviewing and/or permitting
4 authority include the U.S. Army Corps of Engineers (USACE), the USFWS, the Advisory Council on Historic
5 Preservation (ACHP), and the Occupational Safety and Health Administration (OSHA).
6

7 No local discretionary (e.g., use) permits are required because the CPUC has preemptive jurisdiction over the
8 construction, maintenance, and operation of the applicant’s facilities in California. The applicant would still have to
9 obtain all ministerial building and encroachment permits from local jurisdictions, and the CPUC’s General Order (GO)
10 131-D requires the applicant to comply with local building, design, and safety standards to the greatest degree
11 feasible to minimize project conflicts with local conditions. The CPUC’s authority, however, does not preempt special
12 districts, such as the Mojave Desert Air Quality Management District or other state agencies or the federal
13 government.
14

15 In Nevada, construction of a utility facility, defined as a transmission line that is 200 kV or more, requires a permit by
16 the Public Utilities Commission of Nevada (PUCN) under the Utility Environmental Protection Act (UEPA) according
17 to Nevada Revised Statutes (NRS) 704.820 through 704.900. However, replacement of an existing facility with a like
18 facility, as determined by the PUCN, does not constitute construction of a utility facility (NRS 704.865).
19

20 Federal, state, and local permits and approvals would be required before construction and operation of the project. A
21 list of the major permits, approvals, and consultations required is presented in Table 1-2. The applicant would be
22 responsible for obtaining all permits and approvals required to implement the project.
23

24 **1.4 Overview Permitting and Environmental Review Process**

25 **1.4.1 Permitting Process**

26 The applicant has filed an application for a CPCN with the CPUC as well as an application for a ROW grant from the
27 BLM. This section describes the permitting processes of the respective agencies.
28

29 **1.4.1.1 CPUC Process**

30 Under California Public Utilities (PU) Codes Section 1001 et seq., investor-owned utilities such as SCE are required
31 to obtain a permit from the CPUC for construction of certain specified infrastructure, including transmission lines over
32 50 kV and substations. Due to the size and components of the proposed transmission line, the proposed project
33 requires a CPCN. Application for a CPCN triggers two concurrent processes: an environmental review pursuant to
34 CEQA, and the review of project need and costs pursuant to PU Code Sections 1001 et seq. and GO 131-D.
35
36
37
38

39 The process of environmental review includes preparation of this document. The process of project costs and need
40 review includes the following procedures and milestones: allowing parties to respond to or protest an application,
41 conducting a pre-hearing conference, publishing a scoping memo, conducting public participation hearings, filing
42 testimony, conducting evidentiary hearings, and publishing briefs. The results of both processes are considered in
43 the CPUC’s proposed and final decisions.
44

45 **1.4.1.2 BLM Process**

46 The proposed ROW application must satisfy the requirements of both the FLPMA and NEPA. FLPMA provides BLM’s
47 primary management direction to administer the public lands under multiple use and sustained yield principles based
48 on land use allocations made in comprehensive land use plans. For the subject lands, BLM developed land use plans
49 under FLPMA to identify which lands within the CDCA and in Nevada are appropriate for transmission line ROWs.
50 The BLM will use the NEPA process to evaluate the direct, indirect, and cumulative impacts of the specific proposal
51 and a range of reasonable alternatives. BLM is also required to make a land use conformity determination. This
52 analysis is explained in more detail in Section 3.9 of this document, “Land Use.”
53



**Figure 1-2
Eldorado-Ivanpah
Transmission Project**
*Proposed Project and Alternatives
and Energy Corridors*

PROPOSED PROJECT

- Transmission Line
- Telecommunications Line
- Redundant Telecommunications Line
- Microwave

ALTERNATIVES

- - - Transmission Line Alternatives
- - - Redundant Telecommunications Line - Mountain Pass
- - - Redundant Telecommunications Line - Golf Course

- Milepost
- Proposed Microwave Tower
- Proposed Substation
- Existing Substation
- City
- Road
- BLM Land
- NPS
- 368 Transmission Corridor
- ACEC

0 1 2 3 4 5
 Miles
 March 2010



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Table 1-2 Major Permits, Approvals, and Consultations

Agency	Required Permit or Approval	Agency Action
Federal Agencies		
Bureau of Land Management	Right-of-Way Grant	Consider granting rights-of-way for portions of the proposed project that would encroach on BLM-administered lands.
	Notice to Proceed	Following issuance of the right-of-way grant and approval of the Construction Operation and Maintenance Plan, consider issuance of a Notice to Proceed with development and mitigation activities.
Advisory Council on Historic Preservation	Section 106 Consultation, National Historic Preservation Act	Has the opportunity to comment if the proposed project may affect cultural resources that are either listed on or eligible for listing on the National Register of Historic Places.
United States Fish and Wildlife Service	Compliance with California and federal Endangered Species Acts and the U.S. Fish and Wildlife Service; Section 7 consultation and biological opinion	Consider lead agency's finding of impact on federally listed or proposed species. Provide Biological Opinion if the proposed project is likely to adversely affect federally listed or proposed species or their habitats.
	Fish and Wildlife Coordination Act	Provide comments to prevent loss of and damage to wildlife resources.
U.S. Army Corps of Engineers	Clean Water Act §404 permit (nationwide or individual)	Consider issuance of a Clean Water Act §404 permit (nationwide or individual) for discharge of dredged or fill material for construction of the transmission line across rivers, streams, and wetlands. Consider issuance of a Nationwide Permit #12 (Utility Line Activities) or Nationwide Permit #18 (Minor Discharges).
Federal Aviation Administration	Hazard/No Hazard Determination (14 CFR Part 77)	Issue a hazard/no hazard determination for any structure over 200 feet or within 20,000 feet of a public airport.
California State Agencies		
California Public Utilities Commission	Certificate of Public Convenience and Necessity	Consider issuing a Certificate of Public Convenience and Necessity to construct and operate the project.
California Department of Fish and Game	Compliance with California and Federal endangered species acts and similar regulatory requirements; development of final biological opinions by the California Department of Fish and Game, the Nevada Department of Wildlife, and the U.S. Fish and Wildlife Service	Review the proposed project for potential impacts to state-listed species.
	California Native Plant Protection Act	Review of mitigation agreement and mitigation plan for plants listed as rare.
	Streambed Alteration Agreement (Section 1603 of the California Fish and Game Code)	Consider issuance of Section 1603 Streambed Alteration Agreement for crossing of any lake or stream or other drainages by trenching.
California Regional Water Quality Control Board (Santa Ana Region 8;	Section 401 Water Quality Certification Permit	Consider approval of certification of activities related to dredge and fill materials.

Table 1-2 Major Permits, Approvals, and Consultations

Agency	Required Permit or Approval	Agency Action
Colorado River Basin Region 7)	National Pollutant Discharge Elimination System (NPDES) Permit or Report of Waste Discharge (RWD)	Consider issuance of a National Pollutant Discharge and Elimination System permit or Report of Waste Discharge permit for discharge of hydrostatic test water or construction dewatering to surface waters or onto dry lands, respectively.
California State Water Resources Control Board	General Construction Activity Storm Water Permit for construction activities on a project of 5 acres or larger	Consider authorization for stormwater discharges to surface waters, pursuant to a General Construction Activities Permit for Construction.
	Temporary permit to use appropriate water	Consider issuance of temporary permit for use of water from a surface stream or other body of water for use in dust suppression or project maintenance activities.
California Department of Transportation	Encroachment Permit	Consider issuance of permits for any activities affecting state highways or within highway easements, including placement of transmission lines across, within, under, or over statement highway rights-of-way.
California State Historic Preservation Office	Section 106 Consultation, NHPA	Consult with the BLM, the applicant, appropriate land management agencies, and others regarding proposed project activities that may affect cultural resources.
Mojave Desert Air Quality Management District	Dust Control Plan	Consider issuance of temporary permit for construction activities causing fugitive dust.
Nevada State Agencies		
Nevada Department of Wildlife	Compliance with Nevada Revised Statutes and regulations that affect wildlife issues	Authorization for certain special status and protected species (e.g., desert tortoise).
Nevada Department of Transportation	Encroachment Permit	Consider issuance of permits for any activities affecting state highways or within highway easements, including placement of transmission lines across, within, under, or over statement highway rights-of-way.
Nevada Department of Environmental Protection, Water Pollution Control Board	National Pollutant Discharge Elimination System Permit or Report of Waste Discharge	Consider issuance of NPDES Permit or RWD for discharge of water used for dust suppression or operation to surface waters or onto dry lands.
Public Utilities Commission of Nevada	Utilities Environmental Permitting Act for installation of a major utility in the State of Nevada	The PUCN is not involved at this stage of the process but the CPUC will be consulting with the PUCN on the project.

1
2 The BLM review process includes the following steps: the applicant files an application and Plan of Development; the
3 BLM conducts an analysis under NEPA to disclose impacts and mitigation; the BLM publishes a Draft EIS and allows
4 a 45-day comment period; the BLM responds to comments in a Final EIS; and the BLM publishes a Record of
5 Decision with decision to approve, approve with mitigation, or deny the application. The opportunities for public
6 comment during this process are described below.
7

8 **1.4.2 Opportunities for Public Review and Comment**
9

10 This section outlines the opportunities for public review and comment on the Draft EIR/EIS. The CPUC and the BLM
11 rely on public input to help identify key issues, develop a range of alternatives, refine the environmental analysis, and

1 develop appropriate mitigation. Figure 1-3 shows an overview of the environmental review process and highlights
2 opportunities for public involvement.

3 4 **1.4.2.1 Agency and Public Scoping**

5
6 Following publication of the Notice of Preparation and the Notice of Intent on July 23 and July 27, 2009, respectively,
7 the EITP 30-day public scoping period began. The scoping period officially closed on August 26, 2009, 30 days after
8 the publication of the Notice of Intent. Comments made during the scoping period were submitted at the scoping
9 meetings and via facsimile, mail, or email. These comments were incorporated into this Draft EIR/EIS, as noted
10 throughout the document.

11
12 During this 30-day scoping period, the CPUC and the BLM also engaged a number of public agencies. A detailed
13 report on the public participation and agency notification is included in Chapter 7, “Consultation and Coordination.”

14 15 **1.4.2.2 Comments on the Draft EIR/EIS**

16
17 In accordance with CEQA (CEQA Guidelines 15087) and NEPA (CEQ Guidelines 40 CFR 1056.9), publication of this
18 Draft EIR/EIS initiated a 45-day public review and comment period. During this public review period, a public meeting
19 will be held to receive public comment on the Draft EIR/EIS. Public meetings will be announced at least 14 days in
20 advance through mailings and news releases. Comments on the Draft EIR/EIS will be considered in the Final
21 EIR/EIS, and may be submitted at the public meeting or via facsimile, mail, or email. Contact information for
22 commenting on this document is as follows:

23
24 Mail: Eldorado–Ivanpah Transmission Project
25 c/o Ecology and Environment, Inc.
26 130 Battery Street, Suite 400
27 San Francisco, CA 94111

28
29 Email: ivanpah@ene.com

30
31 Phone: 877-478-4686
32 Fax: 415-981-0801

33
34 More information can be found on the EITP website: www.cpuc.ca.gov/environment/info/ene/ivanpah/ivanpah.html.

35
36 Correspondence related to review of the Draft EIR/EIS and public hearing will be included as an appendix to the Final
37 EIR/EIS. Substantive comments received on this Draft EIR/EIS will be considered in finalizing the document, and
38 responses to comments will be provided in an appendix to the Final EIR/EIS.

39 40 **1.5 Reader’s Guide to the Document**

41
42 This section identifies the organization of the EIS/EIR and specifies the surveys and information used in its
43 preparation.

44 45 **1.5.1 Organization of the EIR/EIS**

46
47 The EIR/EIS is organized as follows:

48
49 **Executive Summary:** A summary of the description of the proposed project, alternatives, the environmental
50 impacts of the project, and mitigation measures developed to minimize or avoid significant impacts.

1 **1. Introduction:** An overview description of the project, including alternatives; an explanation of the purpose of,
2 need for, and objectives of the project; an explanation of agency roles and usage of the document; an overview
3 of the joint CEQA/NEPA process; and a guide for public usage and understanding of the document.

4 **2. Description of Alternatives and the Proposed Project:** A detailed description of the proposed project and
5 all alternatives, including the No Project Alternative.

6 **3. Affected Environment/Environmental Analysis:** For each resource area, a detailed description of the
7 existing, affected environment; a description of all applicable regulations; an analysis of the impact of the project
8 and all alternatives; a discussion of mitigation measures that would reduce or avoid impacts; an analysis of the
9 environmental impacts of the “Whole of the Action” pursuant to CEQA; and an analysis of the environmental
10 impacts of the “Cumulative Action” pursuant to NEPA.

11 **4. Comparison of Alternatives:** An explanation of the screening process used to develop the alternatives
12 considered in the document and eliminate alternatives not carried forward in the environmental analysis, and a
13 comparative discussion of the proposed project and all alternatives.

14 **5. Cumulative Analysis:** An analysis of the project’s potential to contribute to cumulatively significant impacts.

15 **6. Other Environmental and Regulatory Considerations:** A discussion of the project’s compliance with
16 applicable federal regulations and policies and an analysis of other considerations, including long-term and
17 growth-inducing impacts.

18 **7. Consultation and Coordination:** An overview of the public consultation process, including agency
19 consultation, and a list of technical staff involved in the preparation of the document.

20 **8. References:** Bibliographical information for the sources cited in the document.

21 **1.5.2 Surveys, Studies, and Other Documents Referenced in the EIR/EIS**

22 This EIR/EIS was prepared using information provided by the applicant as well as information contained in technical
23 reports and studies conducted to provide an environmental baseline against which to measure the potential
24 environmental impact of the EITP. This EIR/EIS also notes the applicable laws, policies, and plans that were
25 reviewed in assessing the project’s regulatory compliance.
26
27

28 The applicant submitted a PEA with the application to the CPUC on May 28, 2009. The PEA included the applicant’s
29 purpose and need and a detailed description of the proposed project and all alternatives considered by the applicant.
30 The environmental analysis portion of the PEA assesses impacts on 15 resource areas that are expected in an
31 EIR/EIS. In addition to the information included in the PEA, the applicant has submitted responses to specific
32 questions asked by the BLM and the CPUC, including requests for additional information or requests to clarify
33 information already submitted.
34
35

36 Technical reports were prepared to facilitate the analyses of certain issues and resources: aesthetics, air quality,
37 biological, geological, minerals and soils, hydrology and water quality, noise, and cultural resources. Because of the
38 level of technical detail in these reports, they have been referenced in the resource sections and included as
39 appendices to the document.
40
41

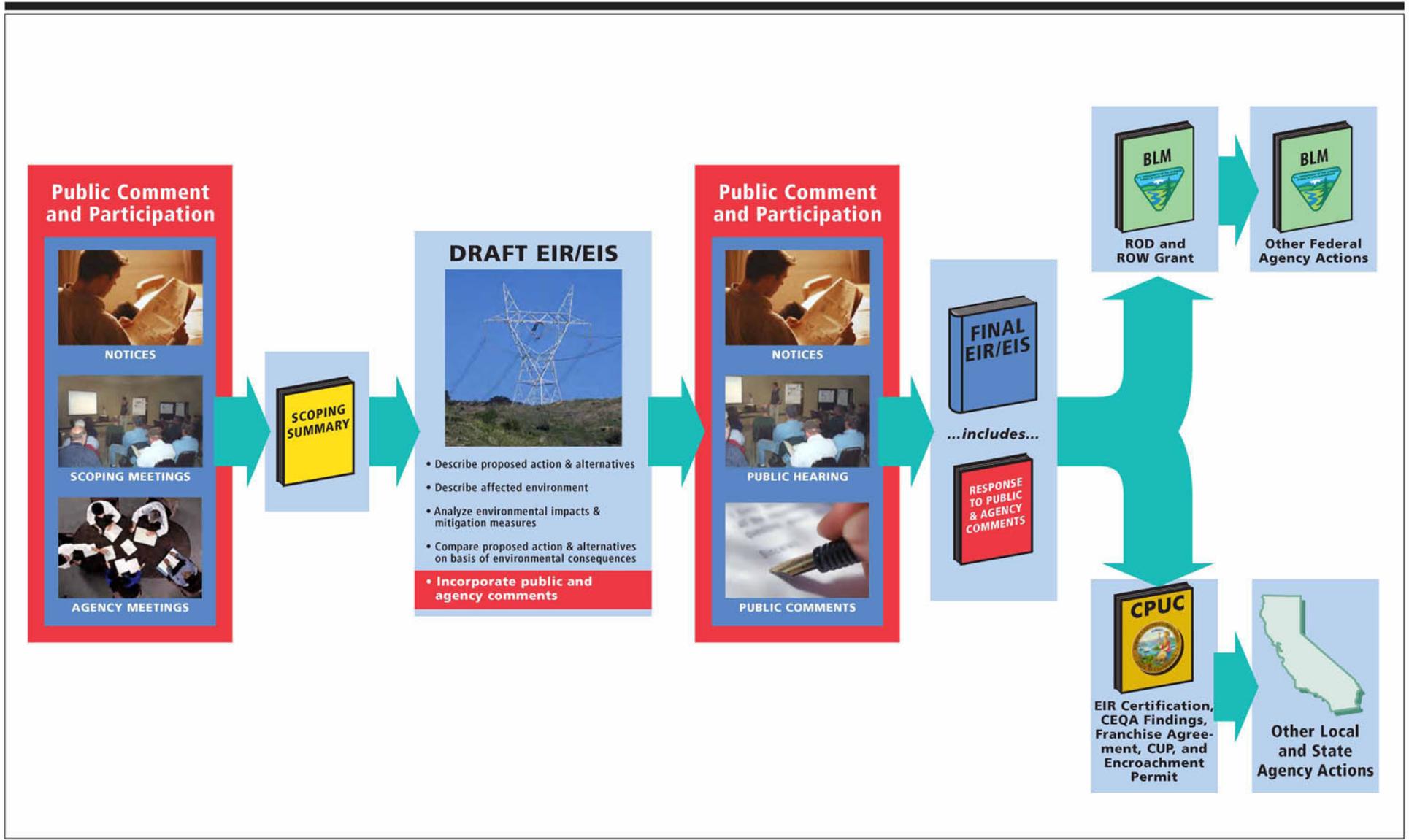


Figure 1-3
Opportunities for Public Review and Comment

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1 Each of the resource sections also includes a description of all applicable regulations. These include any federal,
2 state, or local laws, plans, or policies relevant to the resource area. For example, Section 3.4, “Biological Resources,”
3 provides an overview of the CDCA Plan, the BLM’s plan for the portion of the project that would be in California, and
4 the Las Vegas RMP, which is the plan for the portion of the project that would be in Nevada. Section 3.4 also
5 considers any applicable Multiple Species Habitat Conservation Plans, the federal Endangered Species Act, the
6 Clean Water Act, the Migratory Bird Treaty Act, the California Endangered Species Act, and the CDFG code,
7 including the California Native Plant Protection Act. All federal, state, and local plans policies and regulations are
8 publicly available.
9

10 For the Whole of the Action / Cumulative Action analysis within this document, the CPUC and the BLM incorporated
11 the analysis performed by the CEC and the BLM for the ISEGS project. The ISEGS FSA/DEIS was published
12 November 4, 2009. This document is the CEC functional equivalent of a CEQA document and satisfies the NEPA
13 requirements of the BLM. Because this document was prepared using the format and criteria designed by the CEC to
14 fulfill CEQA, there may be some differences in methodology, significance criteria, and overall organization of
15 resource areas between this document and the CEC and BLM analysis of the ISEGS project. For example, the
16 ISEGS FSA/DEIS analyzes impacts on soil and water together, whereas this EIR/EIS contains a hydrology and water
17 quality analysis that is separate from the geology, soils, minerals, and paleontology analysis. Additionally, there are
18 differences in style and approach between the two documents. For example, the ISEGS FSA/DEIS contains
19 Conditions of Certification, which are similar to the mitigation measures required in this document; one key difference
20 between the two is that the Conditions of Certification include compliance with applicable laws (such as water quality
21 standards). For the analysis of the environmental impacts of the EITP, compliance with laws is considered required
22 and, in most instances, compliance with applicable laws is not included as mitigation. However, despite any
23 differences between the two documents, the CPUC and the BLM will not re-analyze the environmental impacts of the
24 ISEGS project within this document, but will include them in Chapter 5 of this document for disclosure purposes and
25 to assist the agencies in their decision making process.
26

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