

# D.1 Introduction to Environmental Analysis

## D.1.1 Introduction/Background

Section D of this EIR/EIS examines the environmental consequences associated with the Proposed Project and the alternatives to it. Section D includes analyses of the 14 environmental issue areas listed below:

D.2 Biological Resources	D.9 Transportation and Traffic
D.3 Visual Resources	D.10 Public Health and Safety
D.4 Land Use	D.11 Air Quality
D.5 Wilderness and Recreation	D.12 Water Resources
D.6 Agriculture	D.13 Geology, Mineral Resources, and Soils
D.7 Cultural and Paleontological Resources	D.14 Socioeconomics and Utilities
D.8 Noise	D.15 Fire and Fuels Management

In addition, Section D also includes two other sections relating to impact analysis:

- D.16 – Policy Consistency Analysis
- D.17 – Plan Amendments

Within each issue area in Section D, discussions are presented in the following order:

- Environmental Setting for the Proposed Project
- Applicable Regulations, Plans, and Standards
- Significance Criteria and Approach to Impact Assessment
- Environmental Impacts and Mitigation Measures for the Proposed Project
- Environmental Setting for Future Transmission System Expansion
- Environmental Impacts and Mitigation Measures for Future Transmission System Expansion
- Environmental Setting for Connected Actions and Indirect Effects
- Environmental Impacts and Mitigation Measures for Connected Actions and Indirect Effects
- Environmental Impacts and Mitigation Measures for Alternatives Along Proposed Project Route
- Mitigation Monitoring, Compliance, and Reporting
- References

Section E of this EIR/EIS includes environmental analysis of the alternatives that are not along the Proposed Project route, including Southwest Powerlink (Southern) Route Alternatives, Non-Wires Alternatives, System Alternatives, and the No Project Alternative.

By identifying the impacts associated with each issue area and the offsetting mitigation measures, the regulatory agencies and the general public are offered a discussion and full disclosure of the significant environmental impacts of the Proposed Project and its alternatives, including the No Project/No Action Alternative.

## D.1.2 Components of the Proposed Project

Analysis within each issue area includes consideration of the components and segments of the Sunrise Powerlink Project within each of the project's five "links" described in Section D.1.2.1. In addition, the Proposed Project analysis for each issue area includes consideration of "Connected Actions" and "Future Transmission System Expansion" as described in Sections D.1.2.2 and D.1.2.3.

### D.1.2.1 "Links" Along Transmission Line Route

#### Imperial Valley Link

- Modification of the existing Imperial Valley Substation to accommodate termination of one new 500 kV transmission line
- Construction of an overhead single-circuit 500 kV transmission line (continuing to proposed Central East Substation)

#### Anza-Borrego Link

- Construction of an overhead single-circuit 500 kV transmission line (continuing to proposed Central East Substation)
- Relocation of an existing 69 and 92 kV transmission line underground within SR78
- Attachment of the existing 69 and 92 kV transmission line segments that are outside SR78 to the SRPL structures and removal of some of the existing structures.

#### Central Link

- Construction of an overhead single-circuit 500 kV transmission line (continuing to proposed Central East Substation)
- Attachment of the existing 69 kV transmission line segment between the eastern boundary of the Central Link and the Central Substation to the SRPL structures and removal of the existing 69 kV structures
- Construction of the new Central East Substation ~~capable of accommodating~~ with termination of one 500 kV transmission line and two 230 kV transmission lines
- Construction of an overhead double-circuit 230 kV transmission line (continuing to existing Sycamore Canyon Substation)
- Relocation of an existing 69 kV transmission line to parallel the proposed 230 kV overhead transmission lines between the junction of SR76 and SR79 and a point near the existing Santa Ysabel Substation. This segment would include removal of the existing 69 kV structures.

#### Inland Valley Link

- Construction of a double-circuit 230 kV transmission line that would consist of both overhead and underground segments (continuing to existing Sycamore Canyon Substation)
- Relocation of approximately one mile of existing 69 kV overhead transmission line to avoid the Cleveland National Forest boundary

### Coastal Link

- Modification of the Sycamore Canyon Substation to accommodate termination of two 230 kV transmission lines and one new 230 kV transmission line
- Construction of a single-circuit 230 kV transmission line that would consist of both overhead and underground segments (continuing to existing Peñasquitos Substation)
- Attachment of existing 138 kV and 69 kV circuits to SRPL structures and removal of existing structures
- Modification of the Peñasquitos Substation to accommodate termination of one new 230 kV transmission line.

### Other System Upgrades

- Reconductoring of the existing 69 kV transmission line between the existing Sycamore Canyon and Elliot Substations, including replacement of some existing poles
- Addition of a 230 kV, 69 MVAR shunt capacitor and a third 230/69 kV transformer to the existing San Luis Rey Substation
- Addition of a 69 kV, 50 MVAR shunt capacitor to the existing South Bay Substation.

#### D.1.2.2 Connected Actions and Indirect Effects

As described in Section B.6, the CPUC and BLM have determined that ~~three~~ ~~four~~ projects are so closely related to the Proposed Project as to be considered “connected actions” under the National Environmental Policy Act (NEPA). The ~~three~~ ~~four~~ projects found to be connected to the Sunrise Powerlink Project are the Stirling Energy Systems solar facility, ~~two components of the Imperial Irrigation District 230 kV transmission system upgrades~~, the Esmeralda–San Felipe Geothermal Project, and the Jacumba Substation ~~(as a component of the Sempra Rumorosa Wind Energy Projects [SWEP])~~. ~~Also, a proposed wind project in Mexico’s La Rumorosa area is considered to have indirect effects as a result of the Proposed Project.~~ Impacts of the construction and operation of ~~each of these~~ the first two “connected action” facilities is presented in each part of Section D.

The Draft EIR/EIS also included analysis of two components of the IID 230 kV transmission system upgrades, but this is no longer considered to be a connected action, based on comments from IID. Therefore, this analysis has been deleted and is struck out of Section D of the Draft EIR/EIS.

The Jacumba Substation and SCE La Rumorosa Wind Project were analyzed in the Draft EIR/EIS. This analysis was modified and expanded in Section 2 of the Recirculated Draft EIR/Supplemental Draft EIS to consider the larger, relocated Jacumba Substation as well as other transmission and substation components, and the larger Sempra RWEPP, superseding the analysis presented in the Draft EIR/EIS. Therefore, the original analysis from Section D of the Draft EIR/EIS has been deleted and is struck out.

#### D.1.2.3 Future Transmission System Expansion

As described in Section B.2.7, the Central East Substation that would be built as a part of the Proposed Project would accommodate up to six 230 kV circuits. Only two circuits are proposed by SDG&E at this time, but construction of additional 230 kV circuits out of the Central East Substation may be required within the next 10 years. Based on information provided by SDG&E, there are four routes that would be most

likely for these future lines. In addition, SDG&E has designed the Central East Substation to accommodate a future 500 kV transmission line that could connect with the Southern California Edison transmission system to the north. Figures B-12a through and B-12c (in Section B, Project Description) illustrate the routes of each of these possible transmission lines. Each part of Section D considers the potential impacts of construction and operation of these potential future transmission lines.

## D.1.3 Alternatives

Section C presents a description of the alternatives that are analyzed in this EIR/EIS. More detailed information on alternatives, including discussion of alternatives eliminated from detailed analysis, is presented in Appendix 1, Alternatives Screening Report.

### D.1.3.1 Routing Alternatives along Proposed Project Corridor

The routing alternatives listed below along the Proposed Project corridor are evaluated in Section D; maps of all alternatives are presented at the end of this section.

#### Imperial Valley Link Alternatives

1. FTHL Eastern Alternative
2. SDG&E West of Dunaway Alternative
3. SDG&E West Main Canal–Huff Road Modification Alternative

#### Anza-Borrego Link Alternatives

4. Partial Underground 230 kV ABDSP SR78 to S2 Alternative
  - With an All-Underground Option
5. Overhead 500 kV ABDSP within Existing ROW
  - With an option for using Proposed Project route east of the Tamarisk Grove Campground

#### Central Link Alternatives

6. Santa Ysabel Existing ROW Alternative
7. Santa Ysabel Partial Underground Alternative
8. Santa Ysabel SR79 All Underground Alternative
9. SDG&E Mesa Grande Alternative

#### Inland Valley Link Alternatives

10. CNF Existing 69 kV Route Alternative
11. Oak Hollow Road Underground Alternative
12. San Vicente Road Transition Alternative
13. Chuck Wagon Road Alternative

#### Coastal Link Alternatives

14. Pomerado Road to Miramar Area North
15. Los Peñasquitos Canyon Preserve–Mercy Road Alternative
16. Black Mountain to Park Village Road Underground Alternative
17. Coastal Link System Upgrade Alternative

## Substation Alternatives

18. Top of the World Substation Alternative

### D.1.3.2 Other Alternatives

The alternatives listed below, which do not follow the Proposed Project corridor, are evaluated in Section E. Maps of these alternatives are presented in Section E with a description of each alternative.

#### Southwest Powerlink Alternatives

19. Interstate 8 Alternative
  - With five route options (Buckman Springs Underground, West Buckman Springs, South Buckman Springs, Campo North, Chocolate Canyon)
20. BCD Alternative
  - With one route option (BCD South)
21. Route D Alternative
22. Modified Route D Alternative
  - With one route option (Star Valley)

#### Non-Wires Alternatives

23. New In-Area Renewable Generation Alternative
24. New In-Area All-Source Generation Alternative

#### System Alternatives

25. LEAPS Generation and Transmission
26. LEAPS Transmission Only

#### No Project/No Action Alternative

### D.1.3.3 Transmission Line Route Revisions

Based on comments on the Draft EIR/EIS and the Recirculated Draft EIR/EIS, several transmission line route revisions were suggested by SDG&E or developed in consultation with the CPUC, BLM and U.S. Forest Service. Route descriptions, maps, and impact analysis for these revisions are presented in sections of the Draft EIR/EIS (as modified in response to comments) and the Recirculated Draft EIR/Supplemental Draft EIS, as shown in Table D.1-1.

**Table D.1-1 Transmission Line Route Revisions**

<u>Route Title</u>	<u>Modifies Which Route?</u>	<u>Analysis Location</u>
<b><u>Reroutes Evaluated in the Recirculated Draft EIR/Supplemental Draft EIS</u></b>		
<u>BLM Gifted Lands Reroute</u>	<u>Proposed Project, Imperial Valley Link</u>	<u>Section 3.1.1</u>
<u>Northern Grapevine Canyon Reroute</u>	<u>Proposed Project, Central Link</u>	<u>Section 3.1.2</u>
<u>Top of the World Substation Alternative Revision</u>	<u>Top of the World Substation Alternative</u>	<u>Section 3.2.1</u>
<u>SDG&amp;E Santa Ysabel Partial Underground Alternative Revision</u>	<u>Santa Ysabel Partial Underground Alternative</u>	<u>Section 3.2.2</u>
<u>Coastal Link System Upgrades Alternative Revision</u>	<u>Coastal Link System Upgrade Alternative</u>	<u>Section 3.2.3</u>
<u>Jacumba SWPL Breakaway Point Reroute</u>	<u>Interstate 8 Alternative</u>	<u>Section 3.3.1</u>
<u>BCD Alternative and BCD South Option Revisions</u>	<u>BCD Alternative and BCD South Option</u>	<u>Section 3.3.2</u>
<u>Highway 67 Hansen Quarry Reroute</u>	<u>Interstate 8 Alternative</u>	<u>Section 3.3.4</u>
<u>Cameron Reroute</u>	<u>Modified Route D Alternative</u>	<u>Section 3.3.5</u>
<u>Western Modified Route D Alternative Reroute</u>	<u>Modified Route D Alternative</u>	<u>Section 3.3.7</u>
<u>Star Valley Option Revision</u>	<u>Star Valley Option</u>	<u>Section 3.3.8</u>
<u>High Meadows Reroute</u>	<u>Interstate 8 Alternative</u>	<u>Section 3.3.3</u>
<b><u>Reroutes Evaluated in the Draft EIR/EIS (as revised in this Final EIR/EIS)</u></b>		
<u>Overhead 500 kV ABDSP Within Existing ROW Alternative Revision</u>	<u>Overhead 500 kV ABDSP Within Existing ROW Alternative</u>	<u>Section D.5.15.2</u>
<u>Central East Substation Ingress/Egress</u>	<u>Proposed Project, Central Link</u>	<u>Section D.4.7</u>
<u>Around Narrows Substation Revision</u>	<u>Overhead 500 kV ABDSP Within Existing ROW Alternative</u>	<u>Section D.4.15.2</u>
<u>N6 Private Land Revision</u>	<u>Proposed Project, Imperial Valley Link</u>	<u>Section D.4.5</u>
<u>SWPL Archaeological Site Reroute</u>	<u>Interstate 8 Alternative</u>	<u>Section E.1.7.2</u>
<u>Pacific Crest Trail Option C/D</u>	<u>Modified Route D Alternative</u>	<u>Section E.4</u>
<u>Chocolate Canyon Option Revision</u>	<u>Chocolate Canyon Option</u>	<u>Section E.1.3.2</u>

## D.1.4 Environmental Assessment Methodology

### D.1.4.1 Impacts and Mitigation Measures

For the purpose of this document, and pursuant to CEQA Guidelines (Section 15125(a)), the environmental setting used for the impact analysis reflects conditions at the time of issuance of the Notice of Preparation (September, 2006).

The EIR/EIS evaluates the environmental consequences and potential impacts that the Proposed Project and the alternatives would create. The impacts identified were compared with specific significance criteria, and were classified according to significance categories listed in each issue area. The cumulative impacts of the project taken together with the related cumulative projects (listed in Section G) were assessed next, and mitigation measures for each impact were identified, if applicable. The focus in the cumulative impact analyses was to identify those project impacts that might not be significant when considered alone, but contribute to a significant impact when viewed in conjunction with past, present and reasonably foreseeable future projects and current, on-going projects with similar mechanisms of impact. The same methodology was applied systematically to each alternative project and alternative route alignment. A comparative analysis of the Proposed Project and the alternatives is provided in Section F of this document.

Once an impact was identified, diligent effort was taken to identify mitigation measures that would reduce the impact to a level that is not significant. Further, for purposes of NEPA, mitigation measures were considered even for impacts that were not found to be significant. Question No. 19a of the federal Council on Environmental Quality's (CEQ) *Forty Most Asked Questions Concerning CEQ's NEPA Regulations* (Forty Questions) clarifies the scope of mitigation measures that must be discussed:

*The mitigation measures discussed in an EIS must cover the range of impacts of the proposal. The measures must include such things as design alternatives that would decrease pollution emissions, construction impacts, esthetic intrusion, as well as relocation assistance, possible land use controls that could be enacted, and other possible efforts. Mitigation measures must be considered even for impacts that by themselves would not be considered "significant." [emphasis added] Once the proposal itself is considered as a whole to have significant effects, all of its specific effects on the environment (whether or not "significant") must be considered, and mitigation measures must be developed where it is feasible to do so. Sections 1502.14(f), 1502.16(h), 1508.14.*

Because CEQ's NEPA guidelines require a reasonably thorough discussion of ways to reduce all adverse impacts, mitigation measures were identified for all classes of impacts (except beneficial impacts). The mitigation measures recommended by this study have been identified in the impact assessment sections and presented in a Mitigation Monitoring, Compliance, and Reporting Table at the end of the analysis for each issue area (also see Section I for discussion of the Mitigation Monitoring Program).

For mitigation measures that would create secondary impacts, impact analysis for each affected discipline follows the mitigation measure.

#### D.1.4.2 Applicant Proposed Measures (APMs)

The Applicant has incorporated a substantial number of measures and procedures to avoid or reduce impacts into the description of its Proposed Project. In the assessment of the impacts, these measures have been assumed to be part of the Proposed Project, and are not included as CPUC-recommended mitigation measures; however, implementation of each APM will be monitored by the CPUC. The APMs that are intended to reduce the impacts in a particular issue area (such as air quality, biology, etc.) are listed in the section addressing that issue area.

#### D.1.4.3 Impact Significance Criteria

While the criteria for determining significant impacts are unique to each issue area, the classification of the impacts was uniformly applied in accordance with the following definitions:

- Class I:** Significant; cannot be mitigated to a level that is less than significant
- Class II:** Significant; can be mitigated to a level that is less than significant
- Class III:** Adverse, less than significant
- Class IV:** Beneficial impact

#### D.1.4.4 Policy Consistency Analysis

In accordance with NEPA's requirement that this EIR consider whether the project would be consistent with plans and policies, Section D.16 and Appendix 2 (Policy Screening Report) present this analysis.

### D.1.4.5 Plan Amendments

The Proposed Project or alternatives could require amendments of land management plans in several different jurisdictions, listed below. Section D.17 describes the components of the project or alternatives that could require the Plan Amendments.

- Bureau of Land Management
  - California Desert Conservation Area Plan
  - Eastern San Diego County Draft Resource Management Plan
  - South Coast Resource Management Plan
- U.S. Forest Service, Cleveland National Forest, Land Management Plan
- Anza-Borrego Desert State Park Land Management Plan

Figure ES-12. Imperial Valley Link: Alternatives Retained  
(formerly Figure D.1-1)

[CLICK HERE TO VIEW](#)

Figure ES-13. Anza-Borrego Link: Alternatives Retained  
(formerly Figure D.1-2)

[CLICK HERE TO VIEW](#)

Figure ES-14. Central Link: Alternatives Retained  
(formerly Figure D.1-3)

[CLICK HERE TO VIEW](#)

Figure D.1-4. Mesa Grande Alternative

[CLICK HERE TO VIEW](#)

Figure D.1-5. CNF Existing 69 kV Route Alternative

[CLICK HERE TO VIEW](#)

Figure D.1-6. Oak Hollow Road Underground Alternative

[CLICK HERE TO VIEW](#)

Figure D.1-7. San Vicente Road Transition Alternative

[CLICK HERE TO VIEW](#)

Figure D.1-8. Chuck Wagon Road Alternative

[CLICK HERE TO VIEW](#)

Figure D.1-9. Pomerado Road to Miramar Area North Alternative (East)

[CLICK HERE TO VIEW](#)

Figure D.1-10. Pomerado Road to Miramar Area North Alternative (West)

[CLICK HERE TO VIEW](#)

Figure D.1-11. Los Peñasquitos Canyon Preserve–Mercy Road Alternative

[CLICK HERE TO VIEW](#)

Figure D.1-12. Black Mountain to Park Village Road Underground Alternative

[CLICK HERE TO VIEW](#)

Figure 3-5. Coastal Link System Upgrades Alternative Revision  
(formerly Figure D.1-13)

[CLICK HERE TO VIEW](#)

Figure 3-3. Top of the World Substation Alternative Revision  
(formerly Figure D.1-14)

[CLICK HERE TO VIEW](#)