

CHAPTER 4

Environmental Analysis

Introduction to Environmental Analysis

This chapter provides discussion and full public disclosure of the significant environmental impacts of the Proposed Project and alternatives, including the No Project Alternative. This chapter examines the potential environmental impacts associated with the Proposed Project and alternatives as they relate to the following 15 areas of environmental analysis:

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|-------------------------------------|------------------------------------|
| 4.1 Aesthetics | 4.9 Land Use and Planning |
| 4.2 Agriculture Resources | 4.10 Noise |
| 4.3 Air Quality | 4.11 Population and Housing |
| 4.4 Biological Resources | 4.12 Public Services |
| 4.5 Cultural Resources | 4.13 Recreation |
| 4.6 Geology, Soils and Seismicity | 4.14 Transportation and Traffic |
| 4.7 Hazards and Hazardous Materials | 4.15 Utilities and Service Systems |
| 4.8 Hydrology and Water Quality | |

Analysis within each issue area includes consideration of the following components of the Proposed Project:

- Replacement of approximately 1.1 miles of two parallel sets of existing single circuit 220 kV transmission line segments with 1.1 miles of double circuit transmission line constructed on the western side of SCE's existing right-of-way (ROW) immediately north of the Rector Substation. This would clear the eastern side of the existing SCE ROW in order to provide a location for the construction of the first 1.1 miles of the new transmission line described immediately below.
- Construction of a new, approximately 18.5-mile long, double circuit 220 kV transmission line that would loop the existing Big Creek 3-Springville 220 kV transmission line into the 220 kV Rector Substation, creating the new Big Creek 3-Rector No. 2 220 kV transmission line circuit and the new Rector-Springville 220 kV transmission line circuit. The first 1.1 miles of the new double circuit transmission line would be on the eastern side of SCE's existing ROW adjacent to the reconstructed double circuit 1.1 mile line segment described above.

- Installation of electrical equipment and substation supporting structures for the transmission lines, protective relays, and a mechanical and electrical equipment room (MEER) at Rector Substation to accommodate the transmission lines; and
- Removal of wave traps and line tuners and installation of additional protective relays at the Rector Substation, Springville Substation, Vestal Substation, and Big Creek 3 Substations.

Within each of the environmental areas listed above, the discussion of project impacts is provided in the following format:

- Environmental Setting
- Regulatory Setting (i.e., applicable regulations, plans, and standards)
- Significance Criteria
- Applicant Proposed Measures
- Environmental Impacts and Mitigation Measures for the Proposed Project
- Cumulative Impacts for the Proposed Project
- Environmental Impacts and Mitigation Measures for the Alternatives including the No Project Alternative

In addition to the No Project Alternative, the following alternatives are fully analyzed in this EIR (refer to Chapter 3 for a description of each alternative):

- Alternative 2
- Alternative 3
- Alternative 6

Each environmental issue area analyzed in this document provides background information and describes the environmental setting (baseline conditions) to help the reader understand the conditions that would cause an impact to occur. In addition, each section describes how an impact is determined to be “significant” or “less than significant”. Finally, the individual sections recommend mitigation measures to reduce significant impacts. Throughout Chapter 4, both impacts and the corresponding mitigation measures are identified by a bold letter-number designation (e.g., **Impact 4.1-1** and **Mitigation Measure 4.1-1a**).

In performing the analysis for this EIR, the EIR preparers relied on available published studies and reports and conducted independent investigations as needed. Information provided by SCE in their application and accompanying environmental documentation was also considered in the EIR analysis after independent review and assessment by the EIR preparers. The specific documents considered and relied upon are cited for each issue area in Sections 4.1 through 4.15.

Environmental Assessment Methodology

Environmental Baseline

The analysis of each issue area begins with an examination of the existing physical setting (baseline conditions as determined pursuant to section 15125(a) of the State CEQA Guidelines) that may be affected by the Proposed Project and alternatives. The effects of the Proposed Project and alternatives are defined as changes to the environmental setting that are attributable to project components or operation. Pursuant to CEQA Guidelines (Section 15125[a]), the environmental setting used to determine the impacts associated with the Proposed Project and alternatives is based on the environmental conditions that existed in the study area in August 2008 at the time the Notice of Preparation was published.

Impact Significance Criteria

Significance criteria are identified for each environmental issue area. The significance criteria serve as benchmarks for determining if a component action would result in a significant adverse environmental impact when evaluated against the baseline. According to the State CEQA Guidelines section 15382, a significant effect on the environment means "...a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project..."

Applicant Proposed Measures (APMs)

In the Proponent's Environmental Assessment (SCE, 2008), SCE identified the following applicant proposed measures (APMs) that would be implemented to avoid or reduce potential impacts from the Proposed Project.

- **APM-BIO-01. *Elderberry Avoidance.*** The elderberry avoidance guidelines of the USFWS (1999) would be followed. At a minimum, all ground-disturbing activities should be avoided within 15 feet of any mature elderberries with basal stem diameters of 1 inch or greater. If elderberry plants with stems having a diameter of 1 inch or greater cannot be avoided, the USFWS would be consulted to develop mitigation measures appropriate to the type of impact.
- **APM-CUL-01. *Documentation and Recordation of Affected Components of the Big Creek Hydroelectric System Historic District.*** SCE would document the affected components of the BCHSHD to National Park Service Historic American Building Survey/Historic American Engineering Record/Historic American Landscape Survey (HABS/HAER/HALS) Level II or Level III standards prior to their removal.

Moreover, the Project Description does incorporate procedures or protocols which directly relate to how the Proposed Project would be constructed, and which were considered as part of the project during preparation of this EIR. The Project Description, therefore, upon adoption of the Final EIR, becomes part of the Mitigation Monitoring, Reporting and Compliance Program, and the construction components and methods therein would be monitored by the CPUC.

Environmental Consequences

The EIR evaluates the environmental consequences and potential impacts that the Proposed Project and the alternatives would create. The impacts identified were compared with predetermined, specific significance criteria, and were classified according to significance categories listed in each issue area. The same methodology was applied systematically to each alternative. The cumulative impacts of the Proposed Project taken together with the related cumulative projects (listed in Section 3.6) were assessed, 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, current, and reasonably foreseeable future projects. A comparative analysis of the Proposed Project and the alternatives is provided in Chapter 5 of this document.

Impact Analysis

The EIR evaluates the potential environmental impacts that the Proposed Project and alternatives would create. Impacts are classified as:

- 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:** Less than significant, no mitigation required
- Class IV:** Beneficial impact
- No Impact:** No impact identified.

When significant impacts are identified, feasible mitigation measures are formulated to eliminate or reduce the intensity of the impacts and focus on the protection of sensitive resources. The effectiveness of a mitigation measure is subsequently determined by evaluating the impact remaining after its application. Those impacts meeting or exceeding the impact significance criteria after mitigation are considered residual impacts that remain significant (Class I). Implementation of more than one mitigation measure may be needed to reduce an impact below a level of significance. The mitigation measures recommended in this document are identified within each issue area section (Sections 4.1 through 4.15) and are presented in the Mitigation Monitoring, Reporting and Compliance Program in Chapter 8 of this document.

Cumulative Projects Impact Analysis

Section 6.4 presents the cumulative impact scenario. The focus in the cumulative impact analysis was to identify those project impacts that might not be significant when considered alone, but may contribute to a significant impact when viewed in conjunction with past, current, and reasonably foreseeable future projects.

Impacts of Alternatives

Chapter 3 provides a list, description, and map that identify alternatives to the Proposed Project. Each issue area section (Sections 4.1 through 4.15) presents the impact analysis for each alternative, while Chapter 5 provides a summary of the collective impacts of each alternative in comparison with the impacts of the Proposed Project.

References – Environmental Analysis

Southern California Edison (SCE), 2008. *Proponent's Environmental Assessment for the San Joaquin Cross Valley Loop Transmission Project*, May 2008.