

5.0 Comparison of Alternatives

The purpose of an alternatives analysis pursuant to the California Environmental Quality Act (CEQA) is to identify feasible options that would attain most of the basic objectives of a proposed project while reducing its significant effects. Pursuant to Section IX.A.1.e of California Public Utilities Commission (CPUC) General Order 131-D, San Diego Gas & Electric Company (the applicant, or SDG&E) provided an analysis of the South Orange County Reliability Enhancement Project (proposed project) and alternatives as part of their application and Proponent’s Environmental Assessment (PEA). After the application was filed, additional alternatives to the proposed project were identified during scoping and by the CPUC’s Energy Division as a result of the agency’s independent review. This chapter provides comparisons of the environmental advantages and disadvantages of the proposed project to each Alternative considered in this Environmental Impact Report (EIR) (Chapter 3, “Description of Alternatives”). The comparisons are based on the assessment of environmental impacts of the proposed project presented in Chapter 4, “Environmental Analysis,” with the environmental impacts of the following alternatives:

- Alternative A: No Project
- Alternative B1: Reconductor Laguna Niguel–Talega 138-kilovolt (kV) Line
- Alternative B2: Use of Existing Transmission Lines (Additional Talega–Capistrano 138-kV Line)
- Alternative B3: Phased Construction of Alternatives B1 and B2
- Alternative B4: Rebuild South Orange County 138-kV System
- Alternative C1: SCE 230-kV Loop-in to Capistrano Substation
- Alternative C2: SCE 230-kV Loop-in to Capistrano Substation Routing Alternative
- Alternative D: SCE 230-kV Loop-in to Reduced-Footprint Substation at Landfill
- Alternative E: New 230-kV Talega–Capistrano Line Operated at 138 kV
- Alternative F: 230-kV Rancho Mission Viejo Substation
- Alternative G: New 138-kV San Luis Rey–San Mateo Line and San Luis Rey Substation Expansion
- Alternative J¹: SCE 230-kV Loop-in to Trabuco Substation

An Environmentally Superior Alternative is proposed in Section 5.3.

5.1 Comparison Methodology

Specific direction regarding the methodology for comparing alternatives to the proposed project is not provided by the CEQA statute or guidelines. Alternatives must be evaluated in terms of the resource areas impacted by the proposed project. CEQA Guidelines Section 15126.6 states that the alternatives considered in an EIR must avoid or substantially lessen a significant impact of the proposed project. This EIR identified six resource areas for which impacts from the proposed project would be significant and unavoidable (air quality, biological resources, cultural resources, land use and planning, transportation and traffic, and cumulative impacts) and 10 resource areas for which impacts would be less than

¹ As described in the Alternatives Screening Report (Appendix B of the Draft EIR), Alternatives H and I were not carried forward to the EIR.

1 significant with or without mitigation (Chapter 4, “Environmental Analysis” and Chapter 6, “Cumulative
2 Impacts and Other CEQA Considerations”).

3
4 Resource areas that are generally given more weight in the comparison of alternatives presented in this
5 chapter are those with long-term or widespread impacts. Impacts associated with construction (i.e.,
6 temporary or short-term impacts), those that would remain localized, or those that can be easily mitigated
7 to less than significant levels are given less weight. For example, impacts on air quality and transportation
8 and traffic would both be temporary (occur only during construction of the proposed project), but impacts
9 on air quality would not remain localized. Direct mitigation for air pollutant emissions can be difficult to
10 implement and, in some cases, cannot sufficiently reduce impacts. In this chapter, the following
11 methodology is used to compare the environmental impacts of the proposed project and alternatives:
12

- 13 • **Step 1: Identification of Alternatives and Potential Environmental Effects.** A screening
14 process was used to identify a number of alternatives to the proposed project. An Alternatives
15 Screening Report (Appendix B) was prepared during this process that documents the criteria used
16 to evaluate and select alternatives for further analysis, including their feasibility, the extent to
17 which they would meet most of the basic objectives of the proposed project (Section 1.2.1,
18 “Objectives of the Proposed Project”), and their potential to avoid or substantially lessen a
19 potentially significant effect of the proposed project. The potentially significant effects identified
20 for the screening report were defined based on the applicant’s PEA and a preliminary review of
21 the proposed project and environmental setting in proposed project area.
- 22 • **Step 2: Evaluation of Environmental Impacts.** The list of potential environmental effects
23 identified for alternatives screening purposes (see Appendix B, Table 4, “Summary of Potentially
24 Significant Effects of the Proposed Project”) was updated based on site visits, CPUC requests for
25 further information, and further research. Environmental impacts from construction and operation
26 of the proposed project are evaluated by resource area in Chapter 4 of this EIR. The evaluation
27 presented in Chapter 4 is much more detailed than presented in the Alternatives Screening Report
28 and covers more resource areas.
- 29 • **Step 3: Comparison of the Proposed Project and Alternatives.** In this chapter, the
30 environmental impacts of the proposed project are compared to those of each alternative,
31 including the No Project Alternative. An Environmentally Superior Alternative is then proposed.
32

33 5.2 Analysis of Alternatives

34
35 An analysis of the advantages and disadvantages of each Alternative in comparison to the proposed
36 project is presented in this section. Determinations are provided that indicate whether the
37 Alternative would be more or less impactful than the proposed project ~~with respect to resource areas for~~
38 ~~which a significant and unavoidable impact would occur from construction or operation of the proposed~~
39 ~~project (i.e., impacts on air quality, biological resources, cultural resources, land use and planning,~~
40 ~~transportation and traffic, and cumulative impacts).~~ Impacts that would be less than significant without
41 mitigation or for which feasible mitigation exists to reduce the impact to less than significant levels are
42 not the focus of the comparison of alternatives presented. Where the analysis determines that impacts
43 would be similar to the proposed project, the proposed project is selected as environmentally superior for
44 that resource area. Table 5-1 provides a summary of the analysis and determinations.

1
2

Table 5-1 Summary of the Alternatives Analyses and Determinations

Resource Area	Proposed Project	Alt. A	Alt. B1	Alt. B2	Alt. B3	Alt. B4	Alt. C1	Alt. C2	Alt. D	Alt. E	Alt. F	Alt. G	Alt. J	Environmentally Superior Alternative
Aesthetics	LTS	Less	Less	Less	Less	Similar	Similar	Similar Greater	Less	Less	Similar	Greater	Less	—
Agriculture and Forestry Resources	LTS	Less	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Greater	Similar	Less	—
Air Quality	S	Less	Less	Less	Less	Greater	Less	Less	Less	Less	Similar Greater	Similar	Less	Alternative J
Biological Resources	S LTS	Less	Similar Less	Similar Less	Similar Less	Similar Greater	Less	Less Greater	Similar	Similar	Greater Similar	Similar	Less	Alternative J —
Cultural and Paleontological Resources	S	Less	Less	Less	Similar Less	Similar	Similar	Similar	Similar Less	Less	Less	Greater	Less	Alternative J
Geology, Soils, and Mineral Resources	LTS	Less	Less	Less	Similar	Similar	Similar	Similar	Similar	Less	Greater	Greater	Less	—
Greenhouse Gas Emissions	LTS	Less	Less	Less	Less	Greater	Similar	Similar	Similar	Less	Greater	Greater	Less	—
Hazards and Hazardous Materials	LTS	Less	Less	Less	Less	Similar	Similar	Similar	Greater	Less	Similar	Greater	Similar	—
Hydrology and Water Quality	LTS	Less	Similar	Similar	Similar	Greater	Similar	Greater	Similar	Similar	Similar	Greater	Less	—
Land Use and Planning	S LTS	Less	Less	Less	Less	Similar	Less	Less	Similar	Less	Less Similar	Similar	Less	Alternative J —
Noise	LTS	Less	Less	Less	Less	Greater	Similar	Similar	Less	Less	Less	Greater	Less	—
Population and Housing	LTS	Less	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar	—
Public Services and Utilities	LTS	Less	Similar	Similar	Similar	Similar	Similar	Similar	Similar Greater	Similar	Similar	Greater	Similar	—
Recreation	LTS	Less	Similar	Similar	Similar	Similar	Similar	Greater	Similar	Similar	Similar	Greater	Less	—
Transportation and Traffic	S LTS	Less	Less Similar	Less	Less	Greater	Similar	Greater	Less	Less	Less	Greater	Less	Alternative J —
Cumulative	S LTS	Less	Less	Less	Less	Greater	Similar	Similar	Less	Less	Less	Greater	Less	Alternative J

Note:
LTS = Less than significant (including impacts that are Less Than Significant with Mitigation)
S = Significant

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1 The following sections compare the environmental impacts of the proposed project with those of each
2 alternative. Determinations are provided that indicate whether the Alternative would result in greater or
3 lesser impacts than the proposed project. A description of each Alternative is provided in Chapter 3,
4 “Description of Alternatives.” Each of the following alternatives are considered to be potentially feasible
5 and would meet most of the basic objectives of the proposed project.
6

7 **5.2.1 Alternative A – No Project**

8

9 Under the No Project Alternative, it is assumed that none of the components of the proposed project
10 would be constructed. All of the significant impacts from construction and operation of the proposed
11 project would be avoided. It is anticipated that minor maintenance work would occur as needed to repair
12 or replace failed or inadequate substation equipment and transmission line facilities as described in
13 Chapter 3, “Description of Alternatives.” Such maintenance activities are not expected to cause a
14 significant impact as they would be constructed without obtaining a Certificate of Public Convenience
15 and Necessity or Permit to Construct from the CPUC pursuant to CPUC General Order 131-D and CEQA
16 Guidelines Section 15260 et seq. and 15300 et seq. (statutory and categorical exemptions).² Work that
17 may require review pursuant to CEQA is not considered part of the No Project Alternative. It follows that
18 none of the mitigation measures included in this EIR to reduce significant impacts to less than significant
19 levels would apply to the No Project Alternative.
20

21 **Determination**

22 The No Project Alternative would be environmentally superior in comparison to the proposed project.
23 Significant and unavoidable impacts of the proposed project on air quality, ~~biological resources, and~~
24 cultural resources, ~~land use and planning, transportation and traffic, and cumulative~~ would be avoided.
25

26 **5.2.2 Alternative B1 – Reconductor Laguna Niguel–Talega 138-kV Line**

27

28 Under this alternative, a new double-circuit 230-kV line would not be installed and the San Juan
29 Capistrano Substation would not be constructed. The use of high-capacity conductor would reduce the
30 number of support structures that would be required to be replaced for 138-kV line reconductoring. For
31 the purposes of this EIR, however, it is conservatively assumed that all of the existing 138-kV structures
32 would be replaced along the section of TL13835 between Capistrano Substation and Talega Substation to
33 allow for reconductoring (approximately 45 transmission line poles³). No new distribution line structures
34 would be installed under Alternative B1. Under the proposed project, approximately 82 transmission line
35 poles and 10 distribution line poles would be installed. The transmission structures installed under
36 Alternative B1 would be smaller than those installed for the proposed project. They would be designed to
37 support a single circuit of a smaller, 138-kV conductor instead of two circuits of a larger 230-kV
38 conductor. In addition, fewer structures would be removed under Alternative B1 than the proposed
39 project.
40

² A categorical exemption is an exemption from CEQA consideration for a class of projects based on a finding by the California Secretary for Resources that the class of projects does not have a significant effect on the environment (CEQA Guidelines Section 15354). A statutory exemption is an exemption from some or all CEQA considerations or the timing of CEQA consideration as defined by California legislature (CEQA Guidelines Section 15260).

³ Along proposed transmission line Segments 1b through 3 (Figure 2-1), 42 new transmission line poles are proposed. It is assumed three transmission line poles would be replaced within the Talega Corridor area. To present a conservative comparison of alternatives to the proposed project, it was not assumed that the existing steel structures between Capistrano Substation and the Rancho San Juan residential area could be used for Alternative B1 without replacement.

1 Accounting for the reduced number of poles to be installed and removed and assuming that the existing
2 Capistrano Substation footprint would remain unchanged, approximately 19 acres⁴ of temporary land
3 disturbance would occur for the construction of Alternative B1, which would be approximately 31.2 acres
4 fewer than for construction of the proposed project (50.2 acres; Table 2-8). Alternative B1 would be
5 completed in approximately 45 months instead of 64 months, see Table 2-6. In addition, fewer workers
6 (less than 45 per day instead of up to 80 per day, Section 2.4.1.2) and less equipment would be required
7 for the construction of Alternative B1 than the proposed project.

8 9 **Aesthetics**

10 Alternative B1 does not include the expansion of the existing Capistrano Substation. Alternative B1
11 would have temporary impacts on aesthetics during construction and negligible permanent impacts during
12 operations similar to the aesthetic impacts associated with the transmission line for the proposed project.
13 Therefore, Alternative B1 would reduce impacts on aesthetics compared to the proposed project.

14 15 **Biological Resources**

16 Under this alternative, new ROW, as described for the proposed project, would be required within Talega
17 Hub within the boundaries of the Talega Conservation Easement. Additionally, construction would occur
18 within the existing SDG&E ROW within the Prima Deshecha Conservation Easement. Implementation of
19 MM-BIO 10, similar to the proposed project, would reduce impacts from potential conflicts with other
20 HCPs. SDG&E has not completed the proper coordination with USFWS and CDFW to determine
21 conflicts with other Habitat Conservation Plans (HCPs) and Natural Community Conservation Plan
22 (NCCPs in the area; similar to the proposed project, impacts under this alternative would be considered
23 significant until SDG&E has completed coordination requirements detailed in Section 6.2 of the SDG&E
24 NCCP that prove otherwise.

25 Construction and operation of this alternative would occur within the same environmental setting as the
26 proposed project, but would require approximately 62 percent less ground disturbance than the proposed
27 project; therefore, the potential impacts on special status species and their habitats would be reduced.
28 Additionally, the temporal length of disturbance would also be reduced under this alternative. However,
29 similar to the proposed project impacts on Covered special-status species would be less than significant
30 through implementation of the SDG&E HCP/NCCP.

31 32 **Cultural Resources**

33 Alternative B1 does not include the expansion of the existing Capistrano Substation. Therefore, the
34 former utility structure (historic site 30-179873) would not be partially demolished under this alternative
35 as described for the proposed project. Alternative B1 would avoid significant impacts on historic
36 resources when compared to the proposed project.

37 38 **Land Use and Planning**

39 Alternative B1 does not include the expansion of the existing Capistrano Substation. Therefore, the
40 construction of 45- to 50-foot-tall buildings to house new 138-kV and 230-kV equipment as described for
41 the proposed project would not occur, and conflicts with local zoning height restriction would not result.
42 Similar to the proposed project and as described in Section 4.10, "Land Use and Planning," the CPUC has
43 responsibility for and jurisdiction over substation and transmission line siting and approval, superseding
44 local jurisdictions, which do not have jurisdiction. However, conflicts or inconsistencies with local

⁴ The sum of the temporary disturbance areas listed for installation of the proposed transmission lines in Table 2-8
is 33.7 acres. This assumes that 82 transmission line poles would be installed and 38 would be removed. If only
45 transmission line poles were installed and a similar ratio of transmission line poles were removed, this would
equates to approximately 19 acres of land disturbance.

jurisdictions are given consideration by the CPUC during its review process. Alternative B1 would substantially reduce impacts on land use and planning when compared to the proposed project. However, as discussed above under “Biological Resources,” this alternative would have significant impacts from conflicts with applicable NCCPs and HCPs in the area. Therefore, impacts on land use under Alternative B1 would remain significant. Implementation of MM-BIO 10, similar to the proposed project, would reduce impacts from potential conflicts with other HCPs.

Under this alternative, a new double-circuit 230-kV line would not be installed and the San Juan Capistrano Substation would not be constructed. The use of high-capacity conductor would reduce the number of support structures that would be required to be replaced for 138-kV line reconductoring. For the purposes of this EIR, however, it is conservatively assumed that all of the existing 138-kV structures would be replaced along the section of TL13835 between Capistrano Substation and Talega Substation to allow for reconductoring (approximately 45 transmission line poles⁵). No new distribution line structures would be installed under Alternative B1. Under the proposed project, approximately 82 transmission line poles and 10 distribution line poles would be installed. The transmission structures installed under Alternative B1 would be smaller than those installed for the proposed project. They would be designed to support a single circuit of a smaller, 138-kV conductor instead of two circuits of a larger 230-kV conductor. In addition, fewer structures would be removed under Alternative B1 than the proposed project.

Accounting for the reduced number of poles to be installed and removed and assuming that the existing Capistrano Substation footprint would remain unchanged, approximately 19 acres⁶ of temporary land disturbance would occur for the construction of Alternative B1, which would be approximately 31.2 acres fewer than for construction of the proposed project (50.2 acres; Table 2-8). Alternative B1 would be completed in approximately 45 months instead of 64 months, see Table 2-6. In addition, fewer workers (less than 45 per day instead of up to 80 per day, Section 2.4.1.2) and less equipment would be required for the construction of Alternative B1 than the proposed project.

Air Quality

Based on the assumed disturbance acreages, the criteria pollutant emissions during construction of Alternative B1 would be approximately 62 percent below the construction emissions for the proposed project. While Alternative B1 would reduce emissions of reactive organic gas (ROG) to less than significant, Alternative B1 criteria pollutant emissions would still exceed regional significance thresholds for NO_x, PM₁₀, and PM_{2.5} prior to mitigation. Implementation of mitigation measures described for the proposed project would reduce NO_x emissions from Alternative B1 to less than significant. However, similar to the proposed project, PM₁₀ and PM_{2.5} emissions from Alternative B1 would remain significant and unavoidable.

Because Alternative B1 does not include expanding the existing Capistrano Substation, the associated significant air quality impact resulting from exceeding the South Coast Air Quality Management District (SCAQMD) local significance threshold (LST) at the 6.4-acre construction site would be avoided.

⁵ Along proposed transmission line Segments 1b through 3 (Figure 2-1), 42 new transmission line poles are proposed. It is assumed three transmission line poles would be replaced within the Talega Corridor area. To present a conservative comparison of alternatives to the proposed project, it was not assumed that the existing steel structures between Capistrano Substation and the Rancho San Juan residential area could be used for Alternative B1 without replacement.

⁶ The sum of the temporary disturbance areas listed for installation of the proposed transmission lines in Table 2-8 is 33.7 acres. This assumes that 82 transmission line poles would be installed and 38 would be removed. If only 45 transmission line poles were installed and a similar ratio of transmission line poles were removed, this would equate to approximately 19 acres of land disturbance.

1 However, LSTs would still be exceeded by Alternative B1 at other locations, and impacts would remain
2 significant and unavoidable.

3 4 **Transportation and Traffic**

5 Under Alternative B1, new conductor would be installed across Interstate 5 (I-5) and State Route 74
6 (SR-74). Impacts on these highways from conductor stringing and construction traffic would be similar to
7 those of the proposed project. It is assumed that less work would occur in the vicinity of Via Pamplona
8 under Alternative B1 than for the proposed project because an available section of underground conduit
9 (1,900 feet long) is already in place that could accommodate a new 138-kV line (Table 2-3). The
10 installation of new conductor may require partial closures along Via Pamplona to facilitate stringing new
11 conductor from the dead-end structures through the existing underground conduit; ~~however, no full road~~
12 ~~closure is anticipated.~~ Additionally, Alternative B1 does not include the expansion of the existing
13 Capistrano Substation; therefore, the associated partial ~~or full~~ closures of Calle San Diego and Camino
14 Capistrano would not occur. ~~Alternative B1 would avoid significant impacts on transportation and traffic~~
15 ~~when compared to the proposed project.~~

16 17 **Cumulative Impacts**

18 Alternative B1 does not include the expansion of the existing Capistrano Substation. Therefore, the
19 associated partial closures of Camino Capistrano in the City of San Juan Capistrano that are required
20 under the proposed project would not occur, and the capacity of Camino Capistrano would not be
21 reduced. Alternative B1 would avoid a cumulatively significant impact on the performance standard of
22 Camino Capistrano.

23 24 **Other Resource Areas**

25 Alternative B1 would reduce impacts on aesthetics, ~~cultural resources~~, geology and soils, GHGs,
26 hazardous materials, and noise as a result of not expanding the existing Capistrano Substation, avoiding
27 trenching along Via Montana, and construction of fewer facilities within the same transmission corridor
28 compared to the proposed project. However, the proposed project would already have less than significant
29 impacts on these resources. Impacts on all other resources would be similar to the proposed project (Table
30 5-1).

31 32 **Determination**

33 Alternative B1 would result in fewer impacts on air quality ~~and land use~~ than the proposed project;
34 however, ~~these~~ impacts would remain significant under Alternative B1. Alternative B1 would reduce the
35 proposed project's cultural resources, ~~transportation and traffic~~, and cumulative impacts to less than
36 significant. This alternative would not increase the capacity of the South Orange County 138-kV system
37 as substantially as the proposed project because a new 230-kV source to South Orange County would not
38 be constructed.

39 40 **5.2.3 Alternative B2 – Use of Existing Transmission Lines (Additional Talega–** 41 **Capistrano 138-kV Line)**

42
43 Under this alternative, the proposed San Juan Capistrano Substation would not be constructed, and it is
44 assumed that the same number of transmission structures that would be installed for Alternatives B1
45 would be installed for Alternative B2. Although the use of high-capacity conductor would reduce the
46 number of support structures requiring replacement for 138-kV line reconductoring under Alternative B2,
47 it is conservatively assumed that all of the existing 138-kV and 66/69-kV structures would be replaced
48 between Capistrano Substation and Talega Substation.

1 Under Alternative B2, however, 38 distribution line poles would be installed, and distribution line poles
2 would be removed as proposed for the relocation of 12-kV Circuit 315. This would not be required under
3 Alternative B2. Accounting for the reduced number of transmission line poles to be installed and removed
4 and assuming that the existing Capistrano Substation footprint would remain unchanged, the construction
5 of Alternative B2 would result in approximately 21.5 acres⁷ of temporary land disturbance, which would
6 be approximately 28.7 acres fewer than for construction of the proposed project.
7

8 Alternative B2 would be completed in less than 36 months (before 2018) instead of 64 months (mid
9 2020), see Table 2-6. In addition, fewer workers (less than 60 per day instead of up to 80 per day, Section
10 2.4.1.2) and less equipment would be required for the construction of Alternative B2 than the proposed
11 project.
12

13 **Aesthetics**

14 Alternative B2 does not include the expansion of the existing Capistrano Substation. Alternative B2
15 would have temporary impacts on aesthetics during construction and negligible permanent impacts during
16 operations similar to the aesthetic impacts associated with the transmission line for the proposed project.
17 Therefore, Alternative B2 would reduce impacts on aesthetics compared to the proposed project.
18

19 **Biological Resources**

20 Under this alternative, new ROW, as described for the proposed project, would be required within Talega
21 Hub within the boundaries of the Talega Conservation Easement. Additionally, construction would occur
22 within the existing SDG&E ROW within the Prima Deshecha Conservation Easement. Implementation of
23 MM-BIO 10, similar to the proposed project, would reduce impacts from potential conflicts with other
24 HCPs. —SDG&E has not completed the proper coordination with USFWS and CDFW to determine
25 conflicts with other HCPs and NCCPs in the area; similar to the proposed project, impacts under this
26 alternative would be considered significant until SDG&E has completed coordination requirements
27 detailed in Section 6.2 of the SDG&E NCCP that prove otherwise. Construction and operation of this
28 alternative would occur within the same environmental setting as the proposed project, but would require
29 approximately 57 percent less ground disturbance than the proposed project; therefore, the potential
30 impacts on special status species and their habitats would be reduced. Additionally, the temporal length of
31 disturbance would also be reduced under this alternative. However, similar to the proposed project
32 impacts on Covered special-status species would be less than significant through implementation of the
33 SDG&E HCP/NCCP.
34

35 **Cultural Resources**

36 Alternative B2 does not include the expansion of the existing Capistrano Substation. Therefore, the
37 former utility structure (historic site 30-179873) would not be partially demolished under this alternative
38 as described for the proposed project. Alternative B2 would avoid significant impacts on historic
39 resources when compared to the proposed project.
40

41 **Land Use and Planning**

42 Alternative B2 does not include the expansion of the existing Capistrano Substation. Therefore, the
43 construction of 45- to 50-foot-tall buildings to house new 138-kV and 230-kV equipment as described for
44 the proposed project would not occur, and conflicts with local zoning height restriction would not result.

⁷ The sum of the temporary disturbance areas listed for installation of the proposed transmission and distribution
lines in Table 2-8 is 36.7 acres (33.7 acres plus 3 acres). This assumes that 82 transmission line and 38
distribution line poles would be installed. If the same number of distribution line poles were installed but only 45
transmission line poles were installed (assuming a similar ratio of transmission line poles were removed), this
would equate to approximately 21.5 acres of land disturbance.

1 However, similar to the proposed project and as described in Section 4.10, “Land Use and Planning,” the
2 CPUC has responsibility for and jurisdiction over substation and transmission line siting and approval,
3 superseding local jurisdictions, which do not have jurisdiction. However, conflicts or inconsistencies with
4 local jurisdictions are given consideration by the CPUC during its review process. Alternative B2 would
5 substantially reduce impacts on land use and planning when compared to the proposed project. However,
6 As discussed above under “Biological Resources,” this alternative may have significant impacts from the
7 conflicts with applicable NCCPs and HCPs in the area. Therefore, impacts on land use under
8 Alternative B2 would remain significant. implementation of MM-BIO 10, similar to the proposed project,
9 would reduce impacts from potential conflicts with other HCPs.

10 11 **Air Quality**

12 Based on the assumed disturbance acreages, the criteria pollutant emissions during construction of
13 Alternative B2 would be approximately 57 percent below the construction emissions for the proposed
14 project. While Alternative B2 would reduce emissions of ROG to less than significant, Alternative B2
15 criteria pollutant emissions would still exceed regional significance thresholds for NO_x, PM₁₀, and PM_{2.5}
16 prior to mitigation. Implementation of mitigation measures described for the proposed project would
17 reduce NO_x emissions from Alternative B2 to less than significant. However, similar to the proposed
18 project, PM₁₀ and PM_{2.5} emissions from Alternative B2 would remain significant and unavoidable.

19
20 Because Alternative B2 does not include expanding the existing Capistrano Substation, the associated
21 significant air quality impact resulting from exceeding the SCAQMD LST at the 6.4-acre construction
22 site would be avoided. However, LST thresholds would still be exceeded by Alternative B2 at other
23 locations, and impacts would remain significant and unavoidable.

24 25 **Transportation and Traffic**

26 Under Alternative B2, new conductor would be installed across I-5 and SR-74. Impacts on these
27 highways from conductor stringing and construction traffic would be similar to those of the proposed
28 project. It is assumed that less work would occur in the vicinity of Via Pamplona under Alternative B2
29 than for the proposed project because an available section of underground conduit (1,900 feet long) is
30 already in place that could accommodate a new 138-kV line (Table 2-3). The installation of new
31 conductor may require partial closures along Via Pamplona to facilitate stringing new conductor from the
32 dead-end structures through the existing underground conduit; ~~however, no full road closure is~~
33 ~~anticipated.~~ Additionally, Alternative B2 does not include the expansion of the existing Capistrano
34 Substation; therefore, the associated partial ~~and full~~ closures of Calle San Diego ~~and Camino Capistrano~~
35 would not occur. ~~Alternative B2 would avoid significant impacts on transportation and traffic when~~
36 ~~compared to the proposed project.~~

37 38 **Cumulative Impacts**

39 Alternative B2 does not include the expansion of the existing Capistrano Substation. Therefore, the
40 associated partial closures of Camino Capistrano in the City of San Juan Capistrano that are required
41 under the proposed project would not occur, and the capacity of Camino Capistrano would not be
42 reduced. Alternative B2 would avoid a cumulatively significant impact on the performance standard of
43 Camino Capistrano.

44 45 **Other Resource Areas**

46 Alternative B2 would reduce impacts on aesthetics, ~~cultural resources,~~ geology and soils, GHGs,
47 hazardous materials, and noise as a result of not expanding the existing Capistrano Substation, avoiding
48 trenching along Via Montana, and construction of fewer facilities within the same transmission corridor
49 compared to the proposed project. However, the proposed project would already have less than significant

1 impacts on these resources. Impacts on all other resources would be similar to the proposed project (Table
2 5-1).

3 4 **Determination**

5 Alternative B2 would result in fewer impacts on air quality and land use than the proposed project;
6 however, ~~thi~~^{ese} impacts would remain significant under Alternative B2. Alternative B2 would reduce the
7 proposed project's cultural resources, ~~transportation and traffic~~, and cumulative impacts to less than
8 significant. This alternative would not increase capacity of the South Orange Coast 138-kV system as
9 substantially as the proposed project because a new 230-kV source to South Orange County would not be
10 constructed.

11 12 **5.2.4 Alternative B3 – Phased Construction of Alternatives B1 and B2**

13
14 Because Alternative B1 and B2 may both be constructed under Alternative B3, it is assumed that the same
15 number of transmission and distribution line poles may be installed as for the proposed project along
16 proposed transmission line Segments 1b and 3. Alternative B3 would result in approximately 6.4 fewer
17 acres of land disturbance than the proposed project because Capistrano Substation would not be expanded
18 (Table 2-8) and trenching would not be required along proposed transmission line Segment 2
19 (approximately 1.1 acres of disturbance).

20
21 In addition, no work would be required along proposed transmission line Segment 1a and at Talega
22 Substation. Less work would be required within the Talega Hub/Corridor because the existing lines would
23 not need to be relocated to allow for construction of a new 230-kV line. Work would still be required
24 within the Talega Hub/Corridor, however, to allow for the construction of Alternatives B1 and B2. It is
25 conservatively estimated that at least 16 fewer transmission line structures would be installed under
26 Alternative B3, which would equate to approximately 6.6 fewer acres of land disturbance. Refer to the
27 calculation methodology described for Alternative B1. Hence, Alternative B3 would result in
28 approximately 14.1 fewer acres of land disturbance than the proposed project.

29
30 Either Alternative B1 or B2 would be completed in less than 36 months (before 2018) instead of 64
31 months (mid 2020), see Table 2-6. It is unclear how much time may be required to complete both
32 Alternatives B1 and B2 or when the two alternatives may be operational if both alternatives are
33 constructed. Fewer workers (less than 60 per day instead of up to 80 per day, Section 2.4.1.2) and less
34 equipment would be required for the construction of Alternative B3 than the proposed project.

35 36 **Aesthetics**

37 Alternative B3 does not include the expansion of the existing Capistrano Substation. Alternative B3
38 would have temporary impacts on aesthetics during construction and negligible permanent impacts during
39 operations similar to the aesthetic impacts associated with the transmission line for the proposed project.
40 Therefore, Alternative B3 would reduce impacts on aesthetics compared to the proposed project.

41 42 **Biological Resources**

43 Under this alternative, new ROW, as described for the proposed project, would be required within Talega
44 Hub within the boundaries of the Talega Conservation Easement. Additionally, construction would occur
45 within the existing SDG&E ROW within the Prima Deshecha Conservation Easement. Implementation of
46 MM-BIO 10, similar to the proposed project, would reduce impacts from potential conflicts with other
47 HCPs. —SDG&E has not completed the proper coordination with USFWS and CDFW to determine
48 conflicts with other HCPs and NCCPs in the area; therefore, similar to the proposed project, impacts
49 under this alternative would be considered significant until SDG&E has completed the coordination
50 requirements detailed in Section 6.2 of the SDG&E NCCP that prove otherwise. Construction and

1 operation of this alternative would occur within the same environmental setting as the proposed project,
2 but would require approximately 28 percent less ground disturbance than the proposed project; therefore,
3 the potential impacts on special status species and their habitats would be reduced. Additionally, the
4 temporal length of disturbance would also be reduced under this alternative. However, similar to the
5 proposed project impacts on Covered special-status species would be less than significant through
6 implementation of the SDG&E HCP/NCCP.

7 8 **Cultural Resources**

9 Alternative B3 does not include the expansion of the existing Capistrano Substation. Therefore, the
10 former utility structure (historic site 30-179873) would not be partially demolished under this alternative
11 as described for the proposed project. Alternative B3 would avoid significant impacts on historic
12 resources when compared to the proposed project.

13 14 **Land Use and Planning**

15 Alternative B3 does not include the expansion of the existing Capistrano Substation. Therefore, the
16 construction of 45- to 50-foot-tall buildings to house new 138-kV and 230-kV equipment as described for
17 the proposed project would not occur, and conflicts with local zoning height restriction would not result.
18 However, similar to the proposed project and as described in Section 4.10, "Land Use and Planning," the
19 CPUC has responsibility for and jurisdiction over substation and transmission line siting and approval,
20 superseding local jurisdictions, which do not have jurisdiction. However, conflicts or inconsistencies with
21 local jurisdictions are given consideration by the CPUC during its review process. Alternative B3 would
22 substantially reduce impacts on land use and planning when compared to the proposed project. However,
23 As discussed above under "Biological Resources," this alternative may have significant impacts from the
24 conflicts with applicable NCCPs and HCPs in the area. Therefore, impacts on land use under
25 Alternative B3 would remain significant. implementation of MM-BIO 10, similar to the proposed project,
26 would reduce impacts from potential conflicts with other HCPs.

27 28 **Air Quality**

29 Based on the assumed disturbance acreages, the criteria pollutant emissions during construction of
30 Alternative B3 would be approximately 28 percent below the construction emissions for the proposed
31 project. While Alternative B3 would reduce impacts on air quality, Alternative B3 criteria pollutant
32 emissions would still exceed regional significance thresholds for ROG, NO_x, PM₁₀, and PM_{2.5} prior to
33 mitigation. Implementation of mitigation measures described for the proposed project would reduce NO_x
34 emissions from Alternative B3 to less than significant. However, similar to the proposed project, ROG,
35 PM₁₀, and PM_{2.5} emissions from Alternative B3 would remain significant and unavoidable.

36
37 Because Alternative B3 does not include expanding the existing Capistrano Substation, the associated
38 significant air quality impact resulting from exceeding the SCAQMD LST at the 6.4-acre construction
39 site would be avoided. However, LST thresholds would still be exceeded by Alternative B3 at other
40 locations, and impacts would remain significant and unavoidable.

41 42 **Transportation and Traffic**

43 Under Alternative B3, new conductor would be installed across I-5 and SR-74. Impacts on these
44 highways from conductor stringing and construction traffic would be similar to those of the proposed
45 project. It is assumed that less work would occur in the vicinity of Via Pamplona under Alternative B3
46 than for the proposed project because an available section of underground conduit (1,900 feet long) is
47 already in place that could accommodate a new 138-kV line (Table 2-3). The installation of new
48 conductor may require partial closures along Via Pamplona to facilitate stringing new conductor from the
49 dead-end structures through the existing underground conduit; ~~however, no full road closure is~~

1 anticipated. Additionally, Alternative B3 does not include the expansion of the existing Capistrano
2 Substation; therefore, the associated partial ~~or full~~ closures of Calle San Diego and Camino Capistrano
3 would not occur. ~~Alternative B3 would avoid significant impacts on transportation and traffic when~~
4 ~~compared to the proposed project.~~

6 **Cumulative Impacts**

7 Alternative B3 does not include the expansion of the existing Capistrano Substation. Therefore, the
8 associated partial closures of Camino Capistrano in the City of San Juan Capistrano that are required
9 under the proposed project would not occur, and the capacity of Camino Capistrano would not be
10 reduced. Alternative B3 would avoid a cumulatively significant impact on the performance standard of
11 Camino Capistrano.

13 **Other Resource Areas**

14 Alternative B3 would reduce impacts on aesthetics, GHGs, hazardous materials, and noise as a result of
15 not expanding the existing Capistrano Substation, avoiding trenching along Via Montana, and
16 constructing fewer facilities within the same transmission corridor compared to the proposed project.
17 However, the proposed project would already have less than significant impacts on these resources.
18 Impacts on all other resources would be similar to the proposed project (Table 5-1).

20 **Determination**

21 Alternative B3 would result in fewer impacts on air quality and land use than the proposed project;
22 however, ~~these~~ these impacts would remain significant under Alternative B3. Alternative B3 would reduce the
23 proposed project's cultural resources, ~~transportation and traffic~~, and cumulative impacts to less than
24 significant. This alternative would not increase capacity of the South Orange County 138-kV system as
25 substantially as the proposed project because a new 230-kV source to South Orange County would not be
26 constructed.

28 **5.2.5 Alternative B4 – Rebuild South Orange County 138-kV System**

29
30 Under this alternative, substantial construction would occur to reconductor, install new structures, and
31 install new underground conduit along the segments of six 138-kV lines (TL13816, TL13833, TL13834,
32 TL13835, TL13836, and TL13846), see Section 3.2.5, “Alternative B4 – Rebuild South Orange County
33 138-kV System.” New structures and new underground conduit would be installed. In addition, new 138-
34 kV facilities at Capistrano Substation would still be constructed as described for the proposed project. The
35 construction area and total area of disturbance would be larger for Alternative B4 than for the proposed
36 project.

38 **Aesthetics**

39 Alternative B4 does not include the expansion of the existing Capistrano Substation. Alternative B4
40 would have temporary impacts on aesthetics during construction and negligible permanent impacts during
41 operations similar to the aesthetic impacts associated with the transmission line for the proposed project.
42 Therefore, Alternative B4 would reduce impacts on aesthetics compared to the proposed project.

44 **Biological Resources**

45 Under this alternative, new ROW, as described for the proposed project, would be required within Talega
46 Hub within the boundaries of the Talega Conservation Easement. Additionally, construction would occur
47 within the existing SDG&E ROW within the Prima Deshecha Conservation Easement. Implementation of
48 MM-BIO 10, similar to the proposed project, would reduce impacts from potential conflicts with other
49 HCPs. —SDG&E has not completed the proper coordination with USFWS and CDFW to determine

1 ~~conflicts with other HCPs and NCCPs in the area; therefore, similar to the proposed project, impacts~~
2 ~~would be considered significant until SDG&E has completed coordination requirements detailed in~~
3 ~~Section 6.2 of the SDG&E NCCP that prove otherwise. This alternative would require a greater amount~~
4 ~~of ground disturbance than the proposed project; therefore, the potential impacts on special status species~~
5 ~~and their habitats would be increased. Construction and operation of this alternative would occur beyond~~
6 ~~the biological environmental setting for the proposed project, which could result in impacts on biological~~
7 ~~resources not analyzed in this EIR. However, similar to the proposed project, impacts on Covered special-~~
8 ~~status species would be less than significant through implementation of the SDG&E HCP/NCCP.~~

9 10 **Cultural Resources**

11 Alternative B4 includes the rebuild of 138-kV and 12-kV facilities as described for the proposed project.
12 These components would be located in the western side of Capistrano Substation, which would require
13 the former utility structure (historic site 30-179873) to be partially demolished under this alternative as
14 described for the proposed project. Additionally, the construction of additional subtransmission lines
15 beyond the proposed project would increase the potential to encounter previously unknown cultural
16 resources.

17 18 **Land Use and Planning**

19 Alternative B4 includes the rebuild of 138-kV and 12-kV facilities as described for the proposed project.
20 Therefore, this alternative would include construction of one 45-foot-tall 138-kV switchgear building as
21 described for the proposed project. Similar to the proposed project, this structure would conflict with local
22 zoning height restrictions (by 10 feet). However, similar to the proposed project and as described in
23 Section 4.10, "Land Use and Planning," the CPUC has responsibility for and jurisdiction over substation
24 and transmission line siting and approval, superseding local jurisdictions, which do not have jurisdiction.
25 However, conflicts or inconsistencies with local jurisdictions are given consideration by the CPUC during
26 its review process. As additionally, as discussed above under "Biological Resources," this alternative may
27 have significant impacts from the conflicts with applicable NCCPs and HCPs in the area. Therefore,
28 Alternative B4 would have similar significant impacts on land use as the proposed project.
29 implementation of MM-BIO 10, similar to the proposed project, would reduce impacts from potential
30 conflicts with other HCPs.

31 32 **Air Quality**

33 Alternative B4 would increase the total amount of ground disturbance compared to the proposed project;
34 therefore, the criteria pollutant emissions during construction of Alternative B4 would be greater than the
35 construction emissions for the proposed project. Alternative B4 criteria pollutant emissions further exceed
36 regional significance thresholds for ROG, NO_x, PM₁₀, and PM_{2.5} prior to mitigation. Implementation of
37 mitigation measures described for the proposed project would reduce NO_x emissions from
38 Alternative B4 to less than significant. However, similar to the proposed project, ROG, PM₁₀ and PM_{2.5}
39 emissions from Alternative B4 would remain significant and unavoidable. Additionally, if Alternative B4
40 were to disturb more than 58.3 acres (8 acres more than the proposed project) regional significance
41 thresholds for CO₂ would likely be exceeded.

42
43 Alternative B4 includes the expansion of the existing Capistrano Substation similar to the proposed
44 project. Therefore, Alternative B4 would result in a significant air quality impact from exceeding the
45 SCAQMD LST at the 6.4-acre construction site. Alternative B4 would further contribute to the
46 degradation of regional air quality and exacerbate significant air quality impacts.

1 **Transportation and Traffic**

2 Under Alternative B4, new conductor would be installed across I-5 and SR-74. Impacts on these
3 highways from conductor stringing and construction traffic would be similar to those of the proposed
4 project. It is assumed that less work would occur in the vicinity of Via Pamplona under Alternative B4
5 than for the proposed project because an available section of underground conduit (1,900 feet long) is
6 already in place that could accommodate a new 138-kV line (Table 2-3). The installation of new
7 conductor may require partial closures along Via Pamplona to facilitate stringing new conductor from the
8 dead-end structures through the existing underground conduit; ~~however, no full road closure is~~
9 ~~anticipated.~~

10
11 However, Alternative B4 includes the expansion of the existing Capistrano Substation; therefore, the
12 associated partial closures of Calle San Diego ~~and Camino Capistrano~~ would occur similar to the
13 proposed project. Additionally, Alternative B4 includes reconductoring of 138-kV transmission lines to
14 the Laguna Niguel Substation, Trabuco Substation, and Pico Substation. This additional reconductoring
15 would likely require additional temporary partial or full road closure or could have increased impacts to I-
16 5 (see Figure 3-2). Alternative B4 would increase significant impacts on transportation and traffic when
17 compared to the proposed project.
18

19 **Cumulative Impacts**

20 Alternative B4 includes the expansion of the existing Capistrano Substation; therefore, the associated
21 partial closures of Camino Capistrano in the City of San Juan Capistrano would occur similar to the
22 proposed project. Additionally, as discussed above, Alternative B4 includes reconductoring of 138-kV
23 transmission lines to the Laguna Niguel Substation, Trabuco Substation, and Pico Substation. This
24 additional reconductoring would likely result in additional cumulative impact to other street segments.
25 Alternative B4 would increase the cumulatively significant impact on the performance standards of local
26 roadways.
27

28 **Other Resource Areas**

29 Alternative B4 would increase ~~biological resources, cultural resources,~~ GHGs, hydrology, and noise as a
30 result of expanding the existing Capistrano Substation and increasing the amount of reconductoring that
31 would occur compared to the proposed project. Impacts on all other resources would be similar to the
32 proposed project (Table 5-1).
33

34 **Determination**

35 Alternative B4 would result in impacts on air quality, ~~cultural resources, transportation and traffic,~~ and
36 cumulative impacts that are greater than the proposed project. This alternative would not increase
37 capacity of the South Orange County 138-kV system as substantially as the proposed project because a
38 new 230-kV source to South Orange County would not be constructed.
39

40 **5.2.6 Alternative C1 – SCE 230-kV Loop-in to Capistrano Substation**

41
42 Under this alternative, a new double-circuit 230-kV line segment would not be installed between Talega
43 Substation and a location just south of San Juan Hills High School and the Rancho San Juan residential
44 development. The 230-kV line would be approximately 4 miles shorter than the proposed project.
45 Approximately 31 transmission structures would be installed along transmission line Segments 1a, 1b,
46 and 2 and a short section of Segment 3 (see Table 2-4). This would equate to approximately 12.7 acres of
47 land disturbance compared to the 33.7 acres (Table 2-8) that would be disturbed if the proposed
48 transmission lines were installed (82 transmission structures). Refer to the calculation methodology
49 described for Alternative B1.

1
2 It is anticipated that Alternative C1 would be completed in less than 55 months instead of approximately
3 64 months because the work at Talega Substation, within the Talega Hub/corridor, and along most of
4 transmission line Segment 3 would not be required (Table 2-6). In addition, fewer workers, less helicopter
5 use, and less construction equipment use would be required for the construction of Alternative C1 than
6 the proposed project.

7 8 **Aesthetics**

9 Alternative C1 include the expansion of the existing Capistrano Substation, which would have similar
10 impacts on aesthetics as the proposed project. Additionally, the 230-kV transmission line between
11 Capistrano Substation and the loop-in location near San Juan Hills High School under Alternative C1
12 would have temporary impacts on aesthetics during construction and negligible permanent impacts during
13 operations similar to the aesthetic impacts associated with the transmission line for the proposed project.
14 Therefore, Alternative C1 would have similar impacts on aesthetics compared to the proposed project.

15 16 **Biological Resources**

17 No new ROW or work within existing ROW located within an existing conservation easement would
18 occur under this alternative. ~~Therefore, Alternative C1 would not conflict with other HCPs and NCCPs in~~
19 ~~the proposed project area, and impacts under this alternative would be reduced compared to the proposed~~
20 ~~project. Construction and operation of this alternative would occur within the same environmental setting~~
21 ~~as the proposed project, but would require approximately 42 percent less ground disturbance than the~~
22 ~~proposed project; therefore, the potential impacts on special status species and their habitats would be~~
23 ~~reduced. Additionally, the temporal length of disturbance would also be reduced under this alternative.~~
24 However, similar to the proposed project impacts on Covered special-status species would be less than
25 significant through implementation of the SDG&E HCP/NCCP.

26 27 **Cultural Resources**

28 Alternative C1 includes the expansion of the existing Capistrano Substation; therefore, the former utility
29 structure (historic site 30-179873) would be partially demolished as described for the proposed project.
30 Impacts on historical resources under Alternative C1 would remain significant.

31 32 **Land Use and Planning**

33 As discussed above under “Biological Resources,” implementation of MM-BIO 10, similar to the
34 proposed project, would reduce impacts from potential conflicts with the SDG&E HCP/NCCP. ~~this~~
35 ~~alternative would reduce conflicts with applicable NCCPs and HCPs in the area. Therefore,~~
36 ~~Alternative C1 would substantially reduce impacts on land use. However, Alternative C1 includes the~~
37 ~~expansion of the existing Capistrano Substation. The construction of 45- to 50-foot-tall buildings to house~~
38 ~~new 138-kV and 230-kV equipment as described for the proposed project would occur, and conflicts with~~
39 ~~local zoning height restrictions (by 10 to 15 feet) would result. Therefore, impacts on land use under~~
40 ~~Alternative C1 would remain significant. However, similar to the proposed project and as described in~~
41 Section 4.10, “Land Use and Planning,” the CPUC has responsibility for and jurisdiction over substation
42 and transmission line siting and approval, superseding local jurisdictions, which do not have jurisdiction.
43 However, conflicts or inconsistencies with local jurisdictions are given consideration by the CPUC during
44 its review process.

45 46 **Air Quality**

47 Based on the assumed disturbance acreages, the criteria pollutant emissions during construction of
48 Alternative C1 would be approximately 42 percent below the construction emissions for the proposed
49 project. While Alternative C1 would reduce emissions of ROG to less than significant, Alternative C1

1 criteria pollutant emissions would still exceed regional significance thresholds for NO_x, PM₁₀, and PM_{2.5}
2 prior to mitigation. Implementation of mitigation measures described for the proposed project would
3 reduce NO_x emissions from Alternative C1 to less than significant. However, similar to the proposed
4 project, PM₁₀ and PM_{2.5} emissions from Alternative C1 would remain significant and unavoidable.

5
6 Alternative C1 includes the expansion of the existing Capistrano Substation similar to the proposed
7 project. Therefore, Alternative C1 would result in a significant air quality impact from exceeding the
8 SCAQMD LST at the 6.4-acre construction site similar to the proposed project.

9 10 **Transportation and Traffic**

11 Under Alternative C1, a new double-circuit 230-kV line would be installed underground along Vista
12 Montana Road and would cross I-5 and SR-74 as proposed. Impacts on these highways from conductor
13 stringing and construction traffic would be similar to those of the proposed project. This alternative
14 includes partial ~~and full~~ road closures along Via Pamplona, and Calle San Diego, ~~and Camino Capistrano~~,
15 similar to the proposed project because trenching activities required to underground the 230 kV line in the
16 vicinity of Via Pamplona and the expansion of the Capistrano would occur similar to the proposed
17 project. Therefore, Alternative C1 would have similar ~~significant~~ impacts on traffic and transportation as
18 the proposed project.

19 20 **Cumulative Impacts**

21 Alternative C1 includes the expansion of the existing Capistrano Substation; therefore, the associated
22 partial closures of Camino Capistrano in the City of San Juan Capistrano would occur similar to the
23 proposed project. Alternative C1 would have similar cumulative impacts on the performance standards of
24 local roadways.

25 26 **Other Resource Areas**

27 ~~Alternative C1 would reduce impacts on biological resources and cultural resources as a result of~~
28 ~~constructing a shorter transmission line than would be constructed for the proposed project. However, the~~
29 ~~proposed project would already have less than significant impacts on these resources. Impacts on all other~~
30 ~~resources would be similar to the proposed project (Table 5-1).~~

31 32 **Determination**

33 Alternative C1 would result in impacts on air quality ~~and land use~~ that are less than the proposed project;
34 however, ~~these~~ impacts would remain significant under Alternative C1. Alternative C1 would have
35 significant impacts on ~~biological resources, cultural resources, traffic and transportation,~~ and cumulative
36 impacts, similar to the proposed project. This alternative would increase capacity of the South Orange
37 County 138-kV system similar to the proposed project because a new 230-kV source to South Orange
38 County would be constructed.

39 40 **5.2.7 Alternative C2 – SCE 230-kV Loop-in to Capistrano Substation Routing** 41 **Alternative**

42
43 Under this alternative, a new double-circuit 230-kV line segment would not be installed between Talega
44 Substation and a location just south of San Juan Creek Road. The 230-kV line would be 4.5 to 5 miles
45 shorter than as proposed. Approximately 18 transmission structures would be installed along transmission
46 line Segment 1a and a section of Segment 1b. The transmission line would be installed in new
47 underground conduit along San Juan Creek Road. This would equate to approximately 7.39 acres of land
48 disturbance compared to the 33.7 acres (Table 2-8) that would be disturbed if the proposed transmission

1 lines were installed (82 transmission structures). Refer to the calculation methodology described for
2 Alternative B1.

3
4 More land disturbance would occur for trenching along San Juan Creek Road (approximately 1 mile) than
5 along Vista Montana Road (approximately 0.35 miles). This would equate to approximately 6.1 acres of
6 land disturbance along San Juan Creek Road under Alternative C2 and approximately 1.6 acres of land
7 disturbance along Vista Montana Road under the proposed project.⁸ With the additional 4.5 acres of land
8 disturbance for trenching along San Juan Creek Road, Alternative C2 would still result in approximately
9 21.8 fewer acres of land disturbance compared to the proposed project. In addition, helicopter use would
10 not be required for the construction of Alternative C2 (refer to the proposed pole sites north of site No. 11
11 on Figure 2-1). It is anticipated that Alternative C2 would be completed in less than 55 months instead of
12 approximately 64 months because the work at Talega Substation, within the Talega Hub/corridor, and
13 along transmission line Segment 3 would not be required (Table 2-6).

14 **Aesthetics**

15
16 Alternative C2 include the expansion of the existing Capistrano Substation, which would have similar
17 impacts on aesthetics as the proposed project. Additionally, the 230-kV transmission line between
18 Capistrano Substation and the loop-in location near San Juan Creek Road under Alternative C2 would
19 have temporary impacts on aesthetics during construction and permanent impacts during operations
20 greater than the aesthetic impacts associated with the transmission line for the proposed project as the
21 transmission line would be located in a new ROW. For these reasons, the new transmission structures
22 would introduce new encroaching elements that would substantially reduce the vividness, intactness, or
23 unity of views or degrade the existing visual character or quality of the area. Therefore, Alternative C2
24 would have greater impacts on aesthetics compared to the proposed project.

25 **Biological Resources**

26
27 No new ROW or work within existing ROW located within an existing conservation easement would
28 occur under this alternative. ~~Therefore, Alternative C2 would not conflict with other HCPs and NCCPs in~~
29 ~~the proposed project area and impacts would be reduced compared to the proposed project. This~~
30 alternative would result in approximately 42 percent less ground disturbance than the proposed project.
31 However, construction and operation of this alternative would partially occur beyond the biological
32 environmental setting for the proposed project and in a new ROW, which could result in impacts on
33 biological resources not analyzed in this EIR. Similar to the proposed project, impacts on Covered
34 special-status species would be less than significant through implementation of the SDG&E HCP/NCCP.

35 **Cultural Resources**

36
37 Alternative C2 includes the expansion of the existing Capistrano Substation; therefore, the former utility
38 structure (historic site 30-179873) would be partially demolished under this alternative as described for
39 the proposed project. Similar to the proposed project, impacts on historical resources under
40 Alternative C2 would be significant.

41 **Land Use and Planning**

42
43 As discussed above under “Biological Resources,” implementation of MM-BIO 10, similar to the
44 proposed project, would reduce impacts from potential conflicts with the SDG&E HCP/NCCP. this

⁸ This disturbance estimate is based on the assumption that open-cut trenching for the installation of a single 230-kV circuit in new underground conduit would require a 25-foot-wide work area. Two separate trenches would be required along San Juan Creek Road (one for each 230-kV circuit), but only one would be required along Vista Montana Road because of the existing underground conduit available.

1 ~~alternative would reduce conflicts with applicable NCCPs and HCPs in the area. Therefore Alternative C2~~
2 ~~would substantially reduce impacts on land use. However, Alternative C2 includes the expansion of the~~
3 ~~existing Capistrano Substation. The construction of 45- to 50-foot-tall buildings to house new 138-kV and~~
4 ~~230-kV equipment as described for the proposed project would occur, and conflicts with local zoning~~
5 ~~height restrictions (by 10 to 15 feet) would result. Therefore, impacts on land use under Alternative C2~~
6 ~~would remain significant. However, similar to the proposed project and as described in Section 4.10,~~
7 ~~“Land Use and Planning,” the CPUC has responsibility for and jurisdiction over substation and~~
8 ~~transmission line siting and approval, superseding local jurisdictions, which do not have jurisdiction.~~
9 ~~However, conflicts or inconsistencies with local jurisdictions are given consideration by the CPUC during~~
10 ~~its review process.~~

11 12 **Air Quality**

13 Based on the assumed disturbance acreages, the criteria pollutant emissions during construction of
14 Alternative C2 would be approximately 43 percent below the construction emissions for the proposed
15 project. While Alternative C2 would reduce emissions of ROG to less than significant, Alternative C2
16 criteria pollutant emissions would still exceed regional significance thresholds for NO_x, PM₁₀, and PM_{2.5}
17 prior to mitigation. Implementation of mitigation measures described for the proposed project would
18 reduce NO_x emissions from Alternative C2 to less than significant. However, similar to the proposed
19 project, PM₁₀ and PM_{2.5} emissions from Alternative C2 would remain significant and unavoidable.

20
21 Alternative C2 includes the expansion of the existing Capistrano Substation similar to the proposed
22 project. Therefore, Alternative C2 would result in a significant air quality impact from exceeding the
23 SCAQMD LST at the 6.4-acre construction site similar to the proposed project.

24 25 **Transportation and Traffic**

26 Under Alternative C2, a new double-circuit 230-kV line would cross I-5 and SR-74 as proposed. Impacts
27 on these highways from conductor stringing and construction traffic would be similar to those of the
28 proposed project. This alternative would include partial ~~and full~~ road closures along Calle San Diego ~~and~~
29 ~~Camino Capistrano~~ because the expansion of the existing Capistrano Substation would occur similar to
30 the proposed project. Alternative C2 would not include 0.4 miles of trenching in the vicinity of Via
31 Pamplona; therefore, the ~~significant~~ impact on traffic and transportation would be avoided in this area.
32 However, Alternative C2 would include approximately 1 mile of trenching along San Juan Creek Road in
33 the City of San Juan Capistrano. Partial or full road closures along San Juan Creek Road would likely be
34 necessary and would create a significant impact similar to or greater than the proposed project.

35 36 **Cumulative Impacts**

37 Alternative C2 includes the expansion of the existing Capistrano Substation; therefore, the associated
38 partial closures of Camino Capistrano in the City of San Juan Capistrano would occur similar to the
39 proposed project.

40 41 **Other Resource Areas**

42 Alternative C2 would increase impacts on ~~biological resources, cultural resources,~~ hydrology, land use,
43 and recreation as a result of the trenching in a new right-of-way (ROW) along San Juan Creek Road.
44 Impacts on all other resources would be similar to the proposed project (Table 5-1).

45 46 **Determination**

47 Alternative C2 would result in impacts on air quality ~~and land use~~ that are less than the proposed project;
48 however, these impacts would remain significant under Alternative C2. Alternative C2 would have
49 greater impacts on cultural resources ~~and traffic and transportation~~ compared to the proposed project. This

1 alternative would have a significant impact on cumulative impacts, similar to the proposed project. This
2 alternative would increase capacity of the South Orange County 138-kV system similar to the proposed
3 project because a new 230-kV source to South Orange County would be constructed.

5.2.8 Alternative D – SCE 230-kV Loop-in to Reduced-Footprint Substation at Landfill

4
5
6
7
8 Under Alternative D, a new double-circuit 230-kV line segment (less than 0.25 miles long) and a new,
9 single-circuit 138-kV line segment (approximately 0.75 miles long) would be constructed as described in
10 Chapter 3, Section 3.2.8, “Alternative D – SCE 230-kV Loop In to Reduced-Footprint Substation at
11 Landfill.” The combined length of transmission line segments to be constructed under this alternative
12 would be approximately 6.8 miles shorter than as proposed.

13
14 Approximately 8 transmission structures would be installed along transmission line Segment 3 and
15 approximately 0.25 miles of new ROW within Prima Deshecha Landfill. This would equate to
16 approximately 3.3 acres of land disturbance compared to the 33.7 acres (Table 2-8) that would be
17 disturbed if the proposed transmission lines were installed (82 transmission structures). Refer to the
18 calculation methodology described for Alternative B1. In addition, the new 230/138/12-kV substation
19 would likely be smaller than the proposed 230/138/12-kV substation because only one 230/138-kV
20 transformer would be installed instead of two, and only one 138/12-kV transformer would be installed
21 instead of three. Space for a spare 230/138-kV transformer and spare 138/12-kV transformer would still
22 be included as proposed.

23
24 It is anticipated that Alternative D would be completed in less than 50 months instead of approximately
25 64 months because the work at Talega Substation, within the Talega Hub/Corridor area, and along
26 transmission line Segments 1a, 1b, 2, and 4 and most of transmission line Segment 3 would not be
27 required (Table 2-6). In addition, fewer workers, less helicopter use, and less construction equipment use
28 would be required for the construction of Alternative D than the proposed project. Therefore, construction
29 emissions would be substantially less for Alternative D than the proposed project.

Aesthetics

30
31
32 Alternative D would include construction of a new substation within the Prima Deshecha Landfill and
33 placement of eight new 138-kV and 230-kV transmission structures along Segment 3. The Prima
34 Deshecha Landfill and the surrounding area are substantially disturbed and several existing large
35 transmission lines occur in the area. Public views of the substation site are currently limited and views of
36 existing transmission lines in the area are somewhat common (Figure 5-1, Photo 1). Although the
37 substation site may be partially visible from some nearby residential areas, most views from residential
38 areas are screened by terrain. The substation site would be visible from portions of several multiple-use
39 recreation trails with high visual sensitivity located south of the site (e.g., Forster Ridgeline Trail and
40 Talega/Cristianitos Trail); however, it would be viewed in the context of existing disturbed lands of the
41 landfill and several existing large transmission lines. For these reasons, the new substation and
42 transmission structures would not introduce new encroaching elements that would substantially reduce the
43 vividness, intactness, or unity of views or degrade the existing visual character or quality of the area. In
44 addition, Alternative D would require a shorter construction time and involve placement of substantially
45 fewer new transmission structures compared to the proposed project. This alternative would also avoid
46 expansion of the existing Capistrano Substation. Therefore, Alternative D would avoid significant
47 impacts on aesthetics when compared to the proposed project.



Photo 1:
Southeast view of
Prima Deshecha Landfill
from La Pata Avenue



Photo 2:
Northeast view of
Mission Viejo Substation
from westbound State
Route 74



Photo 3:
Southeast view of
Trabuco Substation
from Nellie Gail Ranch
Equestrian Trail

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Figure 5-1
Representative Photos for Alternatives D, F, and J
South Orange County Reliability Enhancement Project

1 **Biological Resources**

2 Under this alternative, construction would occur within the existing SDG&E ROW within the Prima
3 Deshecha Conservation Easement. Implementation of MM-BIO 10, similar to the proposed project,
4 would reduce impacts from potential conflicts with other HCPs. ~~SDG&E has not completed the proper~~
5 ~~coordination with USFWS and CDFW to determine conflicts with other HCPs and NCCPs in the area;~~
6 ~~therefore, similar to the proposed project, impacts may be significant until the completion of SDG&E~~
7 ~~coordination requirements detailed in Section 6.2 of the SDG&E NCCP prove otherwise.~~ This alternative
8 would result in approximately 61 percent less ground disturbance than the proposed project. Although,
9 construction and operation of this alternative would partially occur beyond the biological environmental
10 setting for the proposed project and in new ROW, impacts would occur within the Prima Deshecha
11 Landfill. The Prima Deshecha Landfill is substantially disturbed and would not likely support sensitive
12 species. Similar to the proposed project, impacts on Covered special-status species would be less than
13 significant through implementation of the SDG&E HCP/NCCP.
14

15 **Cultural Resources**

16 Alternative D does not include the expansion of the existing Capistrano Substation. Therefore, the former
17 utility structure (historic site 30-179873) would not be partially demolished under this alternative as
18 described for the proposed project. Alternative D would require ground disturbance for the substation at
19 the landfill; however, this area is substantially disturbed and the potential for a significant cultural
20 resources to be present is low. Alternative D would avoid significant impacts on historic resources when
21 compared to the proposed project.
22

23 **Land Use and Planning**

24 Alternative D does not include the expansion of the existing Capistrano Substation. Therefore, the
25 construction of 45- to 50-foot-tall buildings to house new 138-kV and 230-kV equipment as described for
26 the proposed project would not occur, and conflicts with the City of San Juan Capistrano zoning height
27 restriction would not result.
28

29 Alternative D would construct a new substation within the Prima Deshecha Landfill. The Orange County
30 zoning ordinance designates the proposed location of the Landfill Substation as General Agricultural.
31 Section 7-9-55.3 identifies public/private utility buildings and structures as a permitted use subject to
32 approval of a site development permit. Section 7-9-55.8 (c) identifies a 35-foot maximum structure height
33 for General Agricultural. (County of Orange 2015)
34

35 The construction of the 45- to 50-foot-tall buildings to house new 138-kV and 230-kV equipment, as
36 described for the proposed project, at the Landfill Substation would conflict with the County of Orange
37 zoning height restriction. Similar to the proposed project and as described in Section 4.10, “Land Use and
38 Planning,” the CPUC has responsibility for and jurisdiction over substation and transmission line siting
39 and approval, superseding local jurisdictions, which do not have jurisdiction. However, conflicts or
40 inconsistencies with local jurisdictions are given consideration by the CPUC during its review process.
41

42 Additionally, as discussed above under “Biological Resources,” ~~this alternative may have significant~~
43 ~~impacts from the conflicts with applicable NCCPs and HCPs in the area. Therefore, Alternative D would~~
44 ~~have significant impacts on land use similar to the proposed project.~~ implementation of MM-BIO 10,
45 similar to the proposed project, would reduce impacts from potential conflicts with other HCPs.
46

47 **Air Quality**

48 Based on the assumed disturbance acreages, the criteria pollutant emissions during construction of
49 Alternative D would be approximately 61 percent below the construction emissions for the proposed

1 project. While Alternative D would reduce emissions of ROG to less than significant, Alternative D
2 criteria pollutant emissions would still exceed regional significance thresholds for NOX, PM₁₀, and PM_{2.5}
3 prior to mitigation. Implementation of mitigation measures described for the proposed project would
4 reduce NOX emissions from Alternative D to less than significant. However, similar to the proposed
5 project, PM₁₀ and PM_{2.5} emissions from Alternative D would remain significant and unavoidable.

6
7 Because Alternative D does not include expanding the existing Capistrano Substation, the associated
8 significant air quality impact resulting from exceeding the SCAQMD LST at the 6.4-acre construction
9 site would be avoided. However, LST thresholds would still be exceeded by Alternative D at other
10 locations, including the reduced-sized substation, and impacts would remain significant and unavoidable.

11 12 **Transportation and Traffic**

13 Alternative D would use an existing 138-kV transmission line along Vista Montana. Therefore, partial
14 and full road closures along Via Pamplona would not occur. Additionally, Alternative D does not include
15 the expansion of the existing Capistrano Substation; therefore, the associated partial and full closures of
16 Calle San Diego and Camino Capistrano would not occur. Alternative D would avoid significant impacts
17 on transportation and traffic when compared to the proposed project.

18
19 ~~Alternative D is the Environmentally Superior Alternative for transportation and traffic (Table 5-1)~~
20 ~~compared to the other alternatives because it would completely avoid the roads identified as having a~~
21 ~~significant impact under the proposed project without generating new traffic impacts.~~

22 23 **Cumulative Impacts**

24 Alternative D does not include the expansion of the existing Capistrano Substation. Therefore, the
25 associated partial closures of Camino Capistrano in the City of San Juan Capistrano that are required
26 under the proposed project would not occur, and the capacity of Camino Capistrano would not be
27 reduced. Alternative D would avoid a cumulatively significant impact on the performance standard of
28 Camino Capistrano.

29
30 ~~Alternative D is the Environmentally Superior Alternative for cumulative impacts (Table 5-1) compared~~
31 ~~to the other alternatives because Alternative D would completely avoid the road identified as having a~~
32 ~~cumulatively significant impact under the proposed project as well as avoiding all roads identified as~~
33 ~~having a significant impact under the proposed project without generating new traffic impacts.~~

34 35 **Other Resource Areas**

36 Alternative D would reduce impacts on aesthetics and noise as a result of the reduced substation footprint
37 at the Prima Deshecha Landfill, which, compared to the proposed project, would be in a more rural area
38 than the Capistrano Substation. Alternative D would increase impacts on hazardous materials and land
39 use from the construction of a 230-kV substation within an actively operating landfill. Alternative D
40 would also increase impacts on public services as the substation would be located on land designated for
41 future use (Zone 4) by the Prima Deshecha Landfill operations, which would significantly affect the
42 overall performance objectives of the landfill (Orange County 2006). Mitigation that would require the
43 applicant to locate the substation in an area of the landfill property to allow for a joint use could reduce
44 this impact to less than significant. Impacts on all other resources would be similar to the proposed
45 project (Table 5-1).

46 47 **Determination**

48 Alternative D would result in less impacts on air quality than the proposed project; however, impacts on
49 air quality would remain significant under Alternative D. Alternative D would have similar significant

1 impacts on ~~biological resources, cultural resources, and land use~~. Alternative D would reduce the
2 proposed project's transportation and traffic and cumulative impacts to less than significant. This
3 alternative would have substantially greater impacts on public services. Additionally, the feasibility of
4 SDG&E obtaining the property for this alternative is uncertain as the property is owned and used by the
5 County of Orange for an existing public use. Further, consultation between the applicant and the County
6 of Orange would have to occur to determine the feasibility of this alternative. This alternative would
7 increase capacity of the South Orange County 138-kV system similar to the proposed project because a
8 new 230-kV source to South Orange County would be constructed.

10 **5.2.9 Alternative E – New 230-kV Talega–Capistrano Line Operated at 138 kV**

11
12 Under this alternative, San Juan Capistrano Substation would not be constructed, and a new double-circuit
13 230-kV line segment would not be installed between Capistrano Substation and San Juan Hills High
14 School as proposed. The proposed double-circuit 230-kV line would be constructed between Talega
15 Substation and the San Juan Hills High School and Rancho San Juan residential development area (Figure
16 3-4) but would be operated at 138 kV rather than 230 kV. The new 230-kV line would be approximately
17 3 miles shorter than the proposed 230-kV line.

18
19 Approximately 57 transmission structures would be installed along transmission line Segments 3 and 4
20 (see Table 2-4). The proposed distribution line work would not be required. This would equate to
21 approximately 23.4 acres of land disturbance compared to the 33.7 acres (Table 2-8) that would be
22 disturbed if the proposed transmission and distribution lines were installed. This equates to approximately
23 10 fewer acres of disturbance. Refer to the calculation methodology described for Alternative B1.

24
25 Given the reduced land disturbance associated with the proposed poles and considering that the proposed
26 San Juan Capistrano Substation would not be constructed (6.4 acres), the combined components of
27 Alternative E would result in approximately 16.4 fewer acres of land disturbance than the proposed
28 project. In addition, fewer workers, less helicopter use, and less construction equipment use would be
29 required for the construction of Alternative E than the proposed project.

31 **Aesthetics**

32 Alternative E does not include the expansion of the existing Capistrano Substation. Alternative E would
33 have temporary impacts on aesthetics during construction and negligible permanent impacts during
34 operations similar to the aesthetic impacts associated with the transmission line for the proposed project.
35 Therefore, Alternative E would reduce impacts on aesthetics compared to the proposed project.

37 **Biological Resources**

38 Under this alternative, new ROW, as described for the proposed project, would be required within Talega
39 Hub within the boundaries of the Talega Conservation Easement. Additionally, construction would occur
40 within the existing SDG&E ROW within the Prima Deshecha Conservation Easement. Implementation of
41 MM-BIO 10, similar to the proposed project, would reduce impacts from potential conflicts with other
42 HCPs. –SDG&E has not completed the proper coordination with USFWS and CDFW to determine
43 conflicts with other HCPs and NCCPs in the area; therefore, similar to the proposed project, impacts
44 would be considered significant until SDG&E has completed coordination requirements detailed in
45 Section 6.2 of the SDG&E NCCP that prove otherwise. Construction and operation of this alternative
46 would occur within the same environmental setting as the proposed project, but would require
47 approximately 33 percent less ground disturbance than the proposed project; therefore, the potential
48 impacts on special status species and their habitats would be reduced. Additionally, the temporal length of
49 disturbance would also be reduced under this alternative. However, similar to the proposed project

1 impacts on Covered special-status species would be less than significant through implementation of the
2 SDG&E HCP/NCCP.

4 **Cultural Resources**

5 Alternative E does not include the expansion of the existing Capistrano Substation. Therefore, the former
6 utility structure (historic site 30-179873) would not be partially demolished under this alternative as
7 described for the proposed project. Alternative E would avoid significant impacts on historic resources
8 when compared to the proposed project.

10 **Land Use and Planning**

11 Alternative D does not include the expansion of the existing Capistrano Substation. Therefore, the
12 construction of 45- to 50-foot-tall buildings to house new 138-kV and 230-kV equipment as described for
13 the proposed project would not occur, and conflicts with local zoning height restriction would not result.
14 Alternative D would substantially reduce impacts on land use and planning when compared to the
15 proposed project. Similar to the proposed project and as described in Section 4.10, “Land Use and
16 Planning,” the CPUC has responsibility for and jurisdiction over substation and transmission line siting
17 and approval, superseding local jurisdictions, which do not have jurisdiction. However, conflicts or
18 inconsistencies with local jurisdictions are given consideration by the CPUC during its review process.
19 ~~However, as discussed above under “Biological Resources,” this alternative may have significant~~
20 ~~impacts from the conflicts with applicable NCCPs and HCPs in the area. Therefore, impacts on land use~~
21 ~~under Alternative D would remain significant. implementation of MM-BIO 10, similar to the proposed~~
22 ~~project, would reduce impacts from potential conflicts with other HCPs.~~

24 **Air Quality**

25 Based on the assumed disturbance acreages, the criteria pollutant emissions during construction of
26 Alternative E would be approximately 33 percent below the construction emissions for the proposed
27 project. While Alternative E would reduce impacts on air quality, Alternative E criteria pollutant
28 emissions would still exceed regional significance thresholds for ROG, NO_x, PM₁₀, and PM_{2.5} prior to
29 mitigation. Implementation of mitigation measures described for the proposed project would reduce NO_x
30 emissions from Alternative E to less than significant. However, similar to the proposed project, ROG,
31 PM₁₀ and PM_{2.5} emissions from Alternative E would remain significant and unavoidable.

33 Because Alternative E does not include expanding the existing Capistrano Substation, the associated
34 significant air quality impact resulting from exceeding the SCAQMD LST at the 6.4-acre construction
35 site would be avoided. However, LST thresholds would still be exceeded by Alternative E at other
36 locations, and impacts would remain significant and unavoidable.

38 **Transportation and Traffic**

39 Under Alternative E, new conductor would be installed across I-5 and SR-74. Impacts on these highways
40 from conductor stringing and construction traffic would be similar to those of the proposed project. It is
41 assumed that less work would occur in the vicinity of Via Pamplona under Alternative E than for the
42 proposed project because an available section of underground conduit (1,900 feet long) is already in place
43 that could accommodate a new 138-kV line (Table 2-3). The installation of new conductor may require
44 partial closures along Via Pamplona to facilitate stringing new conductor from the dead-end structures
45 through the existing underground conduit; however, no full road closure is anticipated. Additionally,
46 Alternative E does not include the expansion of the existing Capistrano Substation; therefore, the
47 associated partial or full closures of Calle San Diego and Camino Capistrano would not occur.
48 Alternative E would avoid significant impacts on transportation and traffic when compared to the
49 proposed project.

1
2 **Cumulative Impacts**

3 Alternative E does not include the expansion of the existing Capistrano Substation. Therefore, the
4 associated partial closures of Camino Capistrano in the City of San Juan Capistrano that are required
5 under the proposed project would not occur, and the capacity of Camino Capistrano would not be
6 reduced. Alternative E would avoid a cumulatively significant impact on the performance standard of
7 Camino Capistrano.
8

9 **Other Resource Areas**

10 Alternative E would reduce impacts on aesthetics, ~~cultural resources~~, geology and soils, GHGs, hazardous
11 materials, and noise as a result of not expanding the existing Capistrano Substation, avoiding trenching
12 along Via Montana, and construction of a shorter transmission line compared to the proposed project.
13 However, the proposed project would already have less than significant impacts on these resources.
14 Impacts on all other resources would be similar to the proposed project (Table 5-1).
15

16 **Determination**

17 Alternative E would result in fewer impacts on air quality ~~and land use~~ than the proposed project;
18 however, these impacts would remain significant under Alternative E. Alternative E would reduce the
19 proposed project's cultural resources, ~~transportation and traffic~~, and cumulative impacts to less than
20 significant. This alternative would not increase capacity of the South Orange County 138-kV system as
21 substantially as the proposed project because a new 230-kV source to South Orange County would not be
22 constructed.
23

24 **5.2.10 Alternative F – 230-kV Rancho Mission Viejo Substation**

25
26 Under Alternative F, a new double-circuit 230-kV line that follows the route of TL13831 would be
27 constructed that is approximately 1 mile shorter than the 230-kV route for the proposed route. New ROW
28 would be required, however, to widen the existing 138-kV ROW between Talega and Rancho Mission
29 Viejo substations (approximately 6.5 miles long and 20 feet wide), which would result in more land
30 disturbance than the propose route within existing ROW. It is assumed that additional land disturbance
31 would be required for the installation of new 138-kV facilities and 138-kV reconductoring to make use of
32 the additional power that would be available from an upgraded 230/138/12-kV Rancho Mission Viejo
33 Substation. In addition, the expansion of Rancho Mission Viejo Substation would require a similar
34 amount of land disturbance compared to the construction of San Juan Capistrano Substation.
35

36 **Aesthetics**

37 Alternative F would include expansion of the existing Rancho Mission Viejo Substation, placement of a
38 new 230-kV transmission line adjacent to an existing 138-kV transmission line, and installation of new
39 conductor across SR-74, an Eligible State Scenic Highway. This alternative would involve placement of
40 fewer new transmission structures compared to the proposed project and avoid expansion of the existing
41 Capistrano Substation. The existing Rancho Mission Viejo Substation is visible from nearby areas with
42 high visual sensitivity, including residential areas and SR-74. Public views of the substation expansion
43 site and new transmission line include views of the existing substation, transmission lines, and other
44 development in the area (Figure 5-1, Photo 2). Although new facilities implemented as part of Alternative
45 F would be viewed in the context of existing facilities similar in appearance, the new facilities would
46 represent a substantial increase in the amount of these facilities and their expansion into areas and views
47 of surrounding areas that are primarily natural in appearance. For these reasons, the expanded substation
48 would introduce encroaching elements that potentially would substantially reduce the vividness,
49 intactness, and unity of views and degrade the existing visual character or quality of the area. Aesthetic

1 impacts on SR-74 from conductor stringing and construction activities and equipment would be similar to
2 those of the proposed project. Although new facilities implemented as part of Alternative F would be
3 viewed from SR-74 in the context of existing facilities similar in appearance, the new facilities would
4 represent a substantial increase in the amount of these facilities and their expansion into areas that are
5 primarily natural in appearance. Therefore, Alternative F would potentially substantially damage scenic
6 resources viewed from this Eligible State Scenic Highway. Although Alternative F would involve
7 placement of fewer new transmission structures compared to the proposed project and avoid expansion of
8 the existing Capistrano Substation and associated potential changes to the historic structure's aesthetic
9 character, it has the potential to degrade the existing visual character or quality of the area in the vicinity
10 of the substation expansion and substantially damage scenic resources viewed from a state scenic
11 highway. Therefore, Alternative F would result in similar aesthetic impacts than the proposed project.
12

13 **Biological Resources**

14 Under this alternative, new ROW would be required within the boundaries of Rancho Mission Viejo
15 conservation easements. Implementation of MM-BIO 10, similar to the proposed project, would reduce
16 impacts from potential conflicts with other HCPs. ~~SDG&E has not completed the proper coordination~~
17 ~~with USFWS and CDFW to determine conflicts with other HCPs and NCCPs in the area; therefore,~~
18 ~~similar to the proposed project, impacts would be considered significant until SDG&E has completed~~
19 ~~coordination requirements detailed in Section 6.2 of the SDG&E NCCP that prove otherwise.~~
20 Construction and operation of this alternative would require additional ground disturbance beyond the
21 proposed project. Additionally, construction and operation of this alternative would occur outside of the
22 biological environmental setting for the proposed project and in new ROW, which could result in impacts
23 on biological resources not analyzed in this EIR. Similar to the proposed project, impacts on Covered
24 special-status species would be less than significant through implementation of the SDG&E HCP/NCCP.
25

26 **Cultural Resources**

27 Alternative F does not include the expansion of the existing Capistrano Substation. Therefore, the former
28 utility structure (historic site 30-179873) would not be partially demolished under this alternative as
29 described for the proposed project. Alternative F would avoid significant impacts on historic resources
30 when compared to the proposed project. However, construction within a new ROW would increase the
31 potential to encounter a previously unknown cultural resources. Implementation of mitigation similar to
32 the proposed project would reduce this impact to less than significant.
33

34 **Land Use and Planning**

35 Alternative F does not include the expansion of the existing Capistrano Substation. ~~Therefore~~ However,
36 the construction of 45- to 50-foot-tall buildings to house new 138-kV and 230-kV equipment as described
37 for the proposed project would not occur at the Rancho Mission Viejo Substation, and conflicts with local
38 zoning height restriction would not result be similar. Similar to the proposed project and as described in
39 Section 4.10, "Land Use and Planning," the CPUC has responsibility for and jurisdiction over substation
40 and transmission line siting and approval, superseding local jurisdictions, which do not have jurisdiction.
41 However, conflicts or inconsistencies with local jurisdictions are given consideration by the CPUC during
42 its review process. Alternative F would substantially reduce impacts on land use and planning when
43 compared to the proposed project. However, As discussed above under "Biological Resources,"
44 implementation of MM-BIO 10, similar to the proposed project, would reduce impacts from potential
45 conflicts with other HCPs. this alternative may have significant impacts from the conflicts with applicable
46 NCCPs and HCPs in the area. Therefore, impacts on land use under Alternative F would remain
47 significant.
48

1 Air Quality

2 Alternative F would increase the total amount of ground disturbance compared to the proposed project;
3 therefore, the criteria pollutant emissions during construction of Alternative F would be greater than the
4 construction emissions for the proposed project. Alternative F criteria pollutant emissions further exceed
5 regional significance thresholds for ROG, NO_x, PM₁₀, and PM_{2.5} prior to mitigation. Implementation of
6 mitigation measures described for the proposed project would reduce NO_x emissions from Alternative F
7 to less than significant. However, similar to the proposed project, ROG, PM₁₀ and PM_{2.5} emissions from
8 Alternative F would remain significant and unavoidable.

9
10 The associated significant air quality impact resulting from exceeding the SCAQMD LST at this site
11 would still occur under Alternative F.

12 Transportation and Traffic

13
14 Under Alternative F, new conductor would be installed across SR-74. Impacts on this highway from
15 conductor stringing and construction traffic would be similar to those of the proposed project.
16 Alternative F would not include 0.4 miles of trenching in the vicinity of Via Pamplona; therefore, the
17 ~~significant~~ impact on traffic and transportation would be avoided in this area. Additionally, Alternative F
18 does not include the expansion of the existing Capistrano Substation; therefore, the associated partial
19 closures of Calle San Diego ~~and Camino Capistrano~~ would not occur. Alternative F would avoid
20 ~~significant~~ impacts on transportation and traffic when compared to the proposed project.

21
22 However, Alternative F could result in localized traffic impacts in the vicinity of the Rancho Mission
23 Viejo Substation.

24 Cumulative Impacts

25
26 Alternative F does not include the expansion of the existing Capistrano Substation. Therefore, the
27 associated partial closures of Camino Capistrano in the City of San Juan Capistrano that are required
28 under the proposed project would not occur, and the capacity of Camino Capistrano would not be
29 reduced. Alternative F would avoid a cumulatively significant impact on the performance standard of
30 Camino Capistrano.

31 Other Resource Areas

32
33 Alternative F would reduce impacts on noise as a result of expanding the Rancho Mission Viejo
34 Substation, which compared to the Capistrano Substation, is in a rural area. Alternative F would increase
35 impacts on agriculture as the alternative would impact designated Important Farmland, biological
36 resources, cultural resources, Additionally, Alternative F would increase impacts on geology and soils,
37 and GHGs as a result of building a transmission line through a less disturbed and accessible ROW, which
38 would require more equipment and greater ground disturbance to develop the pole sites. Impacts on all
39 other resources would be similar to the proposed project (Table 5-1).

40 Determination

41
42 Alternative F would result in impacts on air quality that are greater than the proposed project. Impacts on
43 biological resources and land use would be similar to the proposed project, and impacts on land use would
44 be reduced under this alternative. However, impacts on land use would remain to be significant.
45 Alternative F would reduce the proposed project's cultural resources, ~~transportation and traffic~~, and
46 cumulative impacts to less than significant. This alternative would not increase capacity of the South
47 Orange County 138-kV system as substantially as the proposed project because a new 230-kV source to
48 South Orange County would not be constructed.

1 **5.2.11 Alternative G – New 138-kV San Luis Rey–San Mateo Line and San Luis Rey**
2 **Substation Expansion**
3

4 Under Alternative G, the applicant would still expand Capistrano Substation as proposed but would not
5 install the proposed 230-kV components (SCE 2012). A similar amount of land disturbance would still
6 occur at the proposed substation site. A new 138-kV line would be constructed between San Luis Rey
7 Substation and San Mateo Substation that would be approximately 12 miles longer than the proposed line
8 between Talega Substation and Capistrano Substation. Instead of the proposed 82 transmission line
9 structures along a 7.8-mile-long route, more than 250 new structures would be installed. This would
10 equate to approximately 102.7 acres of land disturbance compared to the 33.7 acres (Table 2-8) that
11 would be disturbed if the proposed transmission lines were installed. Refer to the calculation
12 methodology described for Alternative B1.

13
14 In addition, more workers, more helicopter use, and more construction equipment use would be required
15 under this alternative. Therefore, construction emissions would be substantially greater under
16 Alternative G than the proposed project.
17

18 **Aesthetics**

19 Alternative G includes the expansion of the existing Capistrano Substation, which would have similar
20 impacts on aesthetics as the proposed project. Additionally, Alternative G would have temporary impacts
21 on aesthetics during construction and negligible permanent impacts during operations of a new
22 subtransmission line between San Mateo Substation and San Luis Rey Substation similar to the aesthetic
23 impacts associated with the new transmission line for the proposed project. However, the subtransmission
24 line would be longer under Alternative G would be substantially longer and therefore would have greater
25 impacts associated with it. Therefore, Alternative G would have greater impacts on aesthetics compared
26 to the proposed project.
27

28 **Biological Resources**

29 Under this alternative, new ROW, as described for the proposed project, would be required within Talega
30 Hub within the boundaries of the Talega Conservation Easement. Additionally, construction would occur
31 within the existing SDG&E ROW within the Prima Deshecha Conservation Easement. Implementation of
32 MM-BIO 10, similar to the proposed project, would reduce impacts from potential conflicts with other
33 HCPs. SDG&E has not completed the proper coordination with USFWS and CDFW to determine
34 conflicts with other HCPs and NCCPs in the area; therefore, similar to the proposed project, impacts
35 would be considered significant until SDG&E has completed coordination requirements detailed in
36 Section 6.2 of the SDG&E NCCP that prove otherwise. Construction and operation of this alternative
37 would require additional ground disturbance beyond the proposed project. Additionally, construction and
38 operation of this alternative would partially occur outside of the biological environmental setting for the
39 proposed project, which could result in impacts on biological resources not analyzed in this EIR. Similar
40 to the proposed project, impacts on Covered special-status species would be less than significant through
41 implementation of the SDG&E HCP/NCCP.
42

43 **Air Quality**

44 Alternative G would increase the total amount of ground disturbance compared to the proposed project;
45 therefore, the criteria pollutant emissions during construction of Alternative G would be greater than the
46 construction emissions for the proposed project. Alternative G criteria pollutant emissions further exceed
47 regional significance thresholds for ROG, NO_x, PM₁₀, and PM_{2.5} prior to mitigation. Implementation of
48 mitigation measures described for the proposed project would reduce NO_x emissions from Alternative G

1 to less than significant. However, similar to the proposed project, ROG, PM₁₀ and PM_{2.5} emissions from
2 Alternative G would remain significant and unavoidable.

3
4 The associated significant air quality impact resulting from exceeding the SCAQMD LST at this site
5 would still occur under Alternative G.

6 7 **Cultural Resources**

8 Alternative G includes the rebuild of 138-kV and 12-kV facilities as described for the proposed project.
9 These components would be located in the western side of Capistrano Substation, which would require
10 the former utility structure (historic site 30-179873) to be partially demolished under this alternative as
11 described for the proposed project. Similar to the proposed project, impacts on historical resources under
12 Alternative G would be significant. Additionally, the construction of approximately 20 miles of
13 subtransmission line would increase the potential to encounter previously undiscovered cultural resources.
14

15 **Land Use and Planning**

16 Alternative G includes the rebuild of 138-kV and 12-kV facilities as described for the proposed project.
17 Therefore, this alternative would include construction of one 45-foot-tall 138-kV switchgear building as
18 described for the proposed project. Similar to the proposed project, this structure would conflict with local
19 zoning height restrictions (by 10 feet). Similar to the proposed project and as described in Section 4.10,
20 “Land Use and Planning,” the CPUC has responsibility for and jurisdiction over substation and
21 transmission line siting and approval, superseding local jurisdictions, which do not have jurisdiction.
22 However, conflicts or inconsistencies with local jurisdictions are given consideration by the CPUC during
23 its review process. Additionally, as discussed above under “Biological Resources,” ~~this alternative would~~
24 ~~have significant impacts from the conflicts with applicable NCCPs and HCPs in the area. Therefore,~~
25 ~~Alternative G would have similar significant impacts on land use as the proposed project. implementation~~
26 ~~of MM-BIO 10, similar to the proposed project, would reduce impacts from potential conflicts with other~~
27 ~~HCPs.~~

28 29 **Transportation and Traffic**

30 Under Alternative G, new conductor would be installed across I-5 and SR-74. Impacts on these highways
31 from conductor stringing and construction traffic would be similar to those of the proposed project. It is
32 assumed that less work would occur in the vicinity of Via Pamplona under Alternative G than for the
33 proposed project because an available section of underground conduit (1,900 feet long) is already in place
34 that could accommodate a new 138-kV line (Table 2-3). The installation of new conductor may require
35 partial closures along Via Pamplona to facilitate stringing new conductor from the dead-end structures
36 through the existing underground conduit; ~~however, no full road closure is anticipated.~~

37
38 However, Alternative G includes the expansion of the existing Capistrano Substation; therefore, the
39 associated partial closures of Calle San Diego ~~and Camino Capistrano~~ would occur similar to the
40 proposed project. Additionally, Alternative G includes reconductoring of 138-kV transmission lines
41 between San Mateo Substation and San Luis Rey Substation, which are approximately 20 miles apart.
42 This additional reconductoring would likely require additional temporary partial or full road closures or
43 could have increased impacts to I-5 (see Figure 3-2). Alternative G would increase ~~significant~~ impacts on
44 transportation and traffic when compared to the proposed project.

45 46 **Cumulative Impacts**

47 Alternative G includes the expansion of the existing Capistrano Substation; therefore, the associated
48 partial closures of Camino Capistrano in the City of San Juan Capistrano would occur similar to the
49 proposed project. Additionally, as discussed above, Alternative G includes reconductoring of 138-kV

1 transmission lines between San Mateo Substation and San Luis Rey Substation, which are approximately
2 20 miles apart. This additional reconductoring would likely result in additional cumulative impact to other
3 street segments. Alternative G would increase the cumulatively significant impact on the performance
4 standards of local roadways.

6 **Other Resource Areas**

7 With the exception of agriculture and population and housing, Alternative G would increase impacts on
8 all resources as a result of increasing the amount of reconductoring that would occur compared to the
9 proposed project (Table 5-1).

11 **Determination**

12 Alternative G would result in impacts on air quality, ~~transportation and traffic, and cumulative impacts~~
13 that are greater than the proposed project. Impacts on biological resources, cultural resources, and land
14 use and planning would be similar to the proposed project. This alternative would not increase capacity of
15 the South Orange County 138-kV system as substantially as the proposed project because a new 230-kV
16 source to South Orange County would not be constructed.

18 **5.2.1112 Alternative J – SCE 230-kV Loop-in to Trabuco Substation**

19
20 Under this alternative, the applicant's 138/12-kV Trabuco Substation would be expanded to a 230/138/12-
21 kV substation ~~with specifications comparable to those of the proposed project's new San Juan Capistrano~~
22 ~~Substation~~. The substation expansion would use an existing 2-acre AT&T parking lot located adjacent to
23 the north side of the existing Trabuco Substation to ~~house~~accommodate the new 230/138kV equipment.
24

25 A new 230-kV source of power would be added to the South Orange County 138-kV system by looping
26 Southern California Edison's (SCE's) Songs-Santiago 230-kV transmission system into the Trabuco
27 Substation. This would be accomplished by constructing a new underground double circuit 230-kV line
28 from the north along Camino Capistrano or from the east several hundred feet north of Crown Valley
29 Parkway (Figure 3-5). The easterly route would require a crossing of I-5, similar to the proposed project.
30 The new underground 230-kV double circuit transmission line would require new ROW under either
31 routing option.
32

33 Existing infrastructure in the AT&T parking lot would be removed, and civil work would be conducted to
34 establish a new pad for the 230/138-kV equipment. New equipment would include support structures for
35 the 230-kV double circuit transmission line, a 230-kV bus, two 230-kV circuit breakers, two 230/138-kV
36 air-insulated transformers (one required and one spare), a 138-kV circuit breaker, and a new 80- x 40-foot
37 control building. New substation componentry would be set back from the perimeter of the parcel by at
38 least 20 feet (Figure 3-5). A small switchyard would be constructed to loop SCE's Santiago-SONGS 230-
39 kV line into the Trabuco Substation. The existing 138/12-kV substation equipment would not be
40 modified, with the exception of connecting the new 138-kV circuit breaker to the existing 138-kV system.
41

42 The SDG&E South Orange County 138-kV System would not require any reconductoring under this
43 alternative. The Capistrano Substation would not be expanded, but equipment at Capistrano Substation
44 found to be inadequate would be replaced. The distribution circuit 315 (12-kV) would not be relocated.
45

46 **Aesthetics**

47 Alternative J would include expansion of the existing Trabuco Substation. The existing Trabuco
48 Substation is visible from nearby areas with high visual sensitivity, including residential areas and a
49 public park. Public views of the substation expansion site include views of the existing substation,
50 transmission lines, and other development in the area (Figure 5-1, Photo 3). New facilities implemented

1 as part of Alternative J would be viewed in the context of existing facilities similar in appearance and
2 other surrounding developed lands. In addition, Alternative J would involve placement of fewer new
3 transmission structures compared to the proposed project. For these reasons the expanded substation
4 would not introduce new encroaching elements that would substantially reduce the vividness, intactness,
5 or unity of views or degrade the existing visual character or quality of the area. This alternative would
6 also avoid expansion of the existing Capistrano Substation. Therefore, Alternative J would have less of an
7 impact on aesthetics compared to the proposed project.

8 9 **Air Quality**

10 Based on the assumed disturbance acreages, the criteria pollutant emissions during construction of
11 Alternative J would be approximately 88 percent below the construction emissions for the proposed
12 project. Alternative J would reduce emissions of ROG, NOX, PM₁₀, and PM_{2.5} to less than significant
13 levels. Implementation of mitigation measures described for the proposed project would further reduce
14 emissions of criteria pollutants resulting from the construction of Alternative J.

15
16 Because Alternative J does not include expanding the existing Capistrano Substation, the associated
17 significant air quality impact that would result from exceeding the SCAQMD LST at the 6.4-acre
18 construction site would be reduced but would likely remain significant under Alternative J. Alternative J
19 is the Environmentally Superior Alternative for air quality (Table 5-1) compared to the other alternatives
20 because it would not exceed significance thresholds for any criteria air pollutant and would reduce
21 localized significant air impacts.

22 23 **Biological Resources**

24 Under Alternative J, all project componentry would be installed mostly in previously disturbed areas, and
25 lands set aside for conservation under an existing HCP or NCCP would not be affected. Although
26 construction and operation of this alternative would occur beyond the biological environmental setting for
27 the proposed project, impacts on biological resources under this alternative would primarily occur within
28 the Trabuco Substation, AT&T parking lot, and Camino Capistrano. These locations are substantially
29 disturbed. ~~Confining the construction to mostly previously disturbed areas would significantly decrease the~~
30 ~~amount of disturbance, which in turn~~ would reduce the potential for impacts on biological resources.
31 Therefore, impacts on biological resources would be reduced when compared to the proposed project.
32 Similar to the proposed project, impacts on Covered special-status species would be less than significant
33 through implementation of the SDG&E HCP/NCCP.

34
35 ~~Alternative J is the Environmentally Superior Alternative for biological resources (Table 5-1) compared~~
36 ~~to the other alternatives because it would only require about 6 acres of ground disturbance, all in~~
37 ~~previously disturbed areas. Alternative J does not require mitigation credits from the SDG&E NCCP and~~
38 ~~would not impact any conservation area designated by other NCCPs or HCPs in the area.~~

39 40 **Cultural Resources**

41 Alternative J does not include the expansion of the existing Capistrano Substation. Therefore, the former
42 utility structure (historic site 30-179873) would not be partially demolished under this alternative as
43 described for the proposed project. Alternative J would avoid significant impacts on historic resources
44 when compared to the proposed project.

45
46 Alternative J is the Environmentally Superior Alternative for cultural resources (Table 5-1) compared to
47 the other alternatives because the proposed substation would be constructed on previously disturbed areas
48 and would require a shorter length of transmission line work than any other alternatives, which reduces
49 the likeliness of the unanticipated discovery of cultural resources.

1 **Land Use and Planning**

2 As discussed above under “Biological Resources,” ~~this alternative would avoid conflicts with applicable~~
3 ~~NCCPs and HCPs in the area. Therefore Alternative C2 J would substantially reduce impacts on land use.~~
4 implementation of MM-BIO 10, similar to the proposed project, would reduce impacts from potential
5 conflicts with other HCPs.

6
7 Alternative J does not include the expansion of the existing Capistrano Substation. Therefore, the
8 construction of 45- to 50-foot-tall buildings to house new 138-kV and 230-kV equipment as described for
9 the proposed project would not occur, and conflicts with the City of San Juan Capistrano zoning height
10 restriction would not result. However, Alternative J would expand the existing Trabuco Substation. The
11 ~~Laguna Niguel zoning ordinance~~ Laguna Niguel Gateway Specific Plan designates the Trabuco
12 Substation and the existing AT&T parking lot to the north of the substation as Business Park. Table 4-~~1~~
13 ~~under Section 9-1-42 of the Laguna Niguel zoning ordinance specifies~~ of the Laguna Niguel Gateway
14 Specific Plan permitted uses within nonresidential districts and identifies Public Utility Facilities as a
15 permitted use in Business Park. Table 4.2 under Section 9-1-43.1 of the Laguna Niguel zoning ordinance
16 sets forth standards for development of property within nonresidential districts and identifies a 45-foot
17 maximum structure height for Business Park. (City of Laguna Niguel 2014) Table 4-4 of the Laguna
18 Niguel Gateway Specific Plan identifies a maximum height requirement of 60 feet for the project area
19 (Planning District B). (City of Laguna Niguel 2011)

20
21 The construction of the ~~50~~20-foot-tall control building ~~to house new the new 230 kV gas insulated~~
22 ~~substation equipment~~ at the Trabuco Substation, as described for the proposed project, would not conflict
23 with the City of Laguna Niguel zoning height restriction (by 5 feet) Laguna Niguel Gateway Specific
24 Plan. Therefore Alternative J would substantially reduce conflict on land use. ~~Therefore, a significant~~
25 ~~impact on land use would remain under this alternative. Similar to the proposed project and as described~~
26 ~~in Section 4.10, “Land Use and Planning,” the CPUC has responsibility for and jurisdiction over~~
27 ~~substation and transmission line siting and approval, superseding local jurisdictions, which do not have~~
28 ~~jurisdiction. However, conflicts or inconsistencies with local jurisdictions are given consideration by the~~
29 CPUC during its review process.

30
31 ~~Alternative J is the Environmentally Superior Alternative for land use (Table 5-1) compared to the other~~
32 ~~alternatives because only one of the proposed structures on the substation would conflict with local height~~
33 ~~restrictions and only by 5 feet, which is less than the other alternatives. Additionally, as described under~~
34 ~~“Biological Resources,” this alternative would avoid conflicts with applicable NCCPs and HCPs in the~~
35 ~~area.~~

36
37 **Transportation and Traffic**

38 Under Alternative J, new conductor may be installed across I-5, and impacts on this highway from
39 conductor stringing and construction traffic, would be similar to those of the proposed project. The
40 installation of new conductor may require partial closures along Camino Capistrano in northern portion of
41 Laguna Niguel or along La Alameda, Los Altos, and Plaza and Bellogente in western Mission Viejo. The
42 portions of these roads do not provide exclusive access to high trafficked areas; therefore, implementation
43 of a traffic control plan similar to the proposed project would reduce potential impacts to less than
44 significant. in an industrial area of the City of Laguna Niguel ; however, n~~No~~ full road closures are
45 anticipated. Additionally, Alternative J does not include the expansion of the existing Capistrano
46 Substation; therefore, the associated partial ~~or full~~ closures of Calle San Diego and Camino Capistrano (in
47 the city of San Juan Capistrano) would not occur. Work would not occur in the vicinity of Via Pamplona,
48 and impacts to roadways in the vicinity of San Juan Hill High School would be avoided. ~~Therefore,~~
49 ~~Alternative J would avoid significant impacts on transportation and traffic when compared to the~~
50 proposed project.

1
2 **Cumulative Impacts**

3 Alternative J does not include the expansion of the existing Capistrano Substation; therefore, the
4 associated partial closures of Camino Capistrano in the City of San Juan Capistrano would not occur and
5 cumulative impacts would be avoided.

6
7 **Other Resource Areas**

8 Alternative J would reduce impacts on noise as a result of expanding the Trabuco Substation, which
9 compared to the Capistrano Substation, is located further from sensitive receptors. Similar to ordinances
10 identified for the City of San Juan Capistrano, construction noise levels in the City of Laguna Niguel are
11 exempt from noise standards if work occurs between the hours of 7:00 AM and 8:00 PM (City of Laguna
12 Niguel 2014). The Laguna Niguel Gateway Specific Plan does not identify further noise restrictions (City
13 of Laguna Niguel 2011).

14
15 **Determination**

16 Alternative J would result in fewer impacts on air quality ~~and land use and planning~~ than the proposed
17 project; however, impacts on air ~~and land use and planning~~ would remain significant. Alternative J would
18 reduce impacts on cultural resources, ~~air quality, transportation and traffic, and cumulative impacts to less~~
19 ~~than significant~~. This alternative would increase capacity of the South Orange County 138-kV system
20 similar to the proposed project because a new 230-kV source to South Orange County would be
21 constructed.

22
23 **5.3 Environmentally Superior Alternative**

24
25 The No Project Alternative (Alternative A, Section 5.2.1) would be environmentally superior for all
26 environmental resources. The No Project Alternative would be feasible and would meet most of the basic
27 objectives of the proposed project (Section 3.2.1.2, “No Project Alternative and Objectives of the
28 Proposed Project”). However, when the Environmentally Superior Alternative is the No Project
29 Alternative, CEQA requires the identification of an Environmentally Superior Alternative among the
30 other alternatives (CEQA Guidelines Section 15126.6). Therefore, based on the analysis presented in this
31 chapter, Alternative J was found to be the Environmentally Superior Alternative compared to the
32 proposed project and to the other alternatives for the following reasons:

- 33
34
- Alternative J would substantially reduce air quality emissions when compared to the proposed project’s air emissions.
 - ~~Alternative J would reduce significant impacts from conflicts with applicable NCCPs and HCPs to less than significant.~~
 - Alternative J would reduce significant impacts on historic resources to less than significant.
 - ~~Alternative J would reduce significant impacts on transportation and traffic to less than significant.~~
 - ~~Alternative J would reduce significant cumulative impacts to less than significant.~~
- 38
39
40
41