

## 5.0 Comparison and Analysis of Alternatives

This section compares the environmental advantages and disadvantages of the alternatives to the Mesa 500-kilovolt (kV) Substation Project (Mesa Substation Project, or proposed project), while disclosing what the impacts of each alternative would be if implemented. The comparison is based on an assessment of the proposed project's impacts (identified in Chapter 4, "Environmental Analysis" and Chapter 6, "Cumulative Impacts and Other CEQA Requirements"). Chapter 3, "Description of Alternatives," describes the alternatives considered in this Environmental Impact Report (EIR) and also documents all alternatives considered in the alternatives screening process.

Impacts of each alternative (other than the No Project Alternative) are characterized in terms of how the impacts would be similar to and different from the impacts of the proposed project. All three alternatives would be located on the same site as the proposed project and would therefore result in many of the same impacts as the proposed project. However, the smaller sizes and different configurations of each alternative would result in some different impacts than the proposed project. The analysis in this chapter therefore focuses on how the impacts of the alternatives would be different from the impacts of the proposed project, while concluding that the remainder of the impacts of alternatives would be the same as the impacts of the proposed project.

This section is organized as follows:

- Section 5.1, "CEQA Requirements for Alternatives Comparison," describes the California Environmental Quality Act (CEQA) requirements for alternatives comparison.
- Section 5.2, "Comparison Methodology," describes the methodology used in this EIR to compare alternatives.
- Section 5.3, "Comparison of Alternatives," presents the comparative analysis of alternatives.
- Section 5.4, "Environmentally Superior Alternative," defines the Environmentally Superior Alternative, per the comparison of alternatives analysis.
- Section 5.5, "No Project Alternative Comparison," compares the proposed project to the No Project Alternative.

The California Public Utilities Commission has identified the Environmentally Superior Alternative, which is required by CEQA Guidelines Section 15126.6(e)(2). As further discussed in Section 5.4, "Environmentally Superior Alternative," the Environmentally Superior Alternative would be the One-Transformer Bank (1600 megavolt ampere [MVA]) Substation Alternative.

The No Project Alternative includes transmission system options as well as Remedial Action Schemes (RAS) that are likely to be pursued in the absence of the proposed project. The No Project Alternative would likely have more severe environmental impacts than the proposed project and alternatives considered, as described in Section 5.5, "No Project Alternative Comparison."

## 5.1 CEQA Requirements for Alternatives Comparison

As stated in CEQA Guidelines Section 15126.6(d), CEQA requires the following for a comparison of alternatives in an EIR:

*The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.*

Furthermore, CEQA requires that if the No Project Alternative is the Environmentally Superior Alternative, the EIR must identify an Environmentally Superior Alternative among the other alternatives (CEQA Guidelines § 15126.6(e)(2)).

## 5.2 Comparison Methodology

The methodology used to compare alternatives in this EIR includes the following steps:

- **Step 1: Identification of Alternatives and Potential Environmental Effects.** Nine alternatives to the proposed project were screened to determine their suitability for evaluation in the EIR (as described in Chapter 3, “Description of Alternatives”). Three of these alternatives were carried forward for analysis in this EIR, in addition to the No Project Alternative. This range of alternatives is sufficient to foster informed decision-making and public participation. The alternatives screening process did not identify any other potentially feasible alternatives that would meet most of the basic project objectives and avoid or substantially reduce significant impacts of the proposed project.
- **Step 2: Evaluation of Environmental Impacts.** Chapter 4, “Environmental Analysis,” identifies the environmental impacts of the proposed project. Environmental impacts of alternatives are identified in Section 5.3, “Comparison of Alternatives.” The proposed projects’ significant impacts—including impacts that are significant and unavoidable, as well as impacts that are significant and mitigable to less than significant—are also identified in Section 5.3.
- **Step 3: Comparison of the Proposed Project and Alternatives.** The environmental impacts of the proposed project are compared to those of each alternative in Section 5.3, “Comparison of Alternatives,” to determine an Environmentally Superior Alternative, which is described in Section 5.4, “Environmentally Superior Alternative.” Alternatives would in certain areas result in the same impacts as the proposed projects; thus, the comparison of each alternative begins with the definition of the ways the alternative would differ to focus the comparative analysis on how the alternatives would reduce or substantially avoid a significant impact of the proposed projects. The proposed project was then compared to the No Project Alternative in Section 5.5, “No Project Alternative Comparison.”

Selection of the Environmentally Superior Alternative requires balancing many environmental factors. Impacts in each resource area were identified and compared in detailed comparison tables in Section 5.4 in order to identify the Environmentally Superior Alternative. The tables present a ranking of environmental superiority and a brief explanation for the ranking in each environmental

resource area. Comparisons in this section emphasize situations in which an alternative would create impacts in one area as a result of avoiding or reducing impacts in another area. Because no alternative was superior across all resource sections, other factors were ultimately taken into account to select the Environmentally Superior Alternative. Section 5.4, “Environmentally Superior Alternative,” discusses the results of the ranking and what other aspects were taken into account in identifying the Environmentally Superior Alternative.

This EIR identifies an Environmentally Superior Alternative, but it is possible that the California Public Utilities Commission’s decision makers may balance the importance of each impact differently and reach different conclusions.

### 5.3 Comparison of Alternatives

#### 5.3.1 Introduction

This section summarizes significant and unavoidable impacts of the proposed project, the advantages and disadvantages of each alternative, and a determination of whether the proposed project or the alternative would be environmentally superior within each resource area. The preferred alternative is identified for each resource area. An alternative shown in a summary table as preferred still may have environmental effects, but the environmental effects of the preferred alternative would be minimized compared to other alternatives and the proposed project.

Alternatives to the proposed project are described in more detail in Chapter 3, “Description of Alternatives.” Table 5.3-1 briefly summarizes the characteristics of each alternative and how they differ from the proposed project.

**Table 5.3-1 Summary of Alternatives Analyzed**

Alternative Name	Description	Differences with Proposed Project
One-Transformer Bank (1600 MVA) Substation Alternative	<ul style="list-style-type: none"> <li>Project built as proposed, but using one 1600-MVA 500/220-kV transformer bank instead of three 1120-MVA 500/220-kV transformer banks with space for a spare transformer bank</li> </ul>	<ul style="list-style-type: none"> <li>No 1120-MVA 500/220-kV transformer banks</li> <li>One 1600-MVA 500/220-kV transformer bank</li> <li>Smaller 500-kV switchrack</li> <li>Requires RAS</li> <li>Substation footprint reduced by 11.6 acres (see Figure 5-1)</li> </ul>
Two-Transformer Bank (1120 MVA) Transformer Alternative	<ul style="list-style-type: none"> <li>Project built as proposed, but using two 1120-MVA 500/220-kV transformer banks instead of three 1120-MVA 500/220-kV transformer banks with space for a spare transformer bank</li> </ul>	<ul style="list-style-type: none"> <li>One fewer 1120-MVA 500/220-kV transformer bank</li> <li>Smaller 500-kV switchrack</li> <li>Requires RAS</li> <li>Substation footprint reduced by 8.3 acres (see Figure 5-1)</li> </ul>
Gas-Insulated Substation Alternative	<ul style="list-style-type: none"> <li>Project built as proposed, but using gas-insulated switchgear instead of air insulated switchgear</li> </ul>	<ul style="list-style-type: none"> <li>Smaller switchracks for all voltages (500 kV, 220 kV, 66 kV, and 16 kV)</li> <li>Substation footprint reduced by 7.3 acres (see Figure 5-1)</li> </ul>

Key:  
MVA megavolt amperes  
kV kilovolt  
RAS Remedial Action Scheme

1  
2 The proposed project would result in five significant and unavoidable impacts in the resource areas  
3 of aesthetics, air quality, and noise. Significant, unavoidable impacts are listed in Table 5.3-2. The  
4 proposed project would also result in significant impacts that could be mitigated to a less than  
5 significant level and less than significant impacts in the remaining resource areas.  
6

**Table 5.3-2 Significant and Unavoidable Impacts of the Proposed Project**

Resource	Significant and Unavoidable Impact
Aesthetics	<b>Impact AE-1:</b> Substantially degrade the existing visual character or quality of the site and its surroundings.
Air Quality	<b>Impact AQ-2:</b> Violate any air quality standard or contribute substantially to an existing or projected air quality violation <b>Impact AQ-4:</b> Expose sensitive receptors to substantial pollutant concentrations
Noise	<b>Impact NV-1:</b> Result in noise levels in excess of standards established in the local general plan or noise ordinance <b>Impact NV-4:</b> Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity.

7  
8 **5.3.2 Comparison of Alternatives**

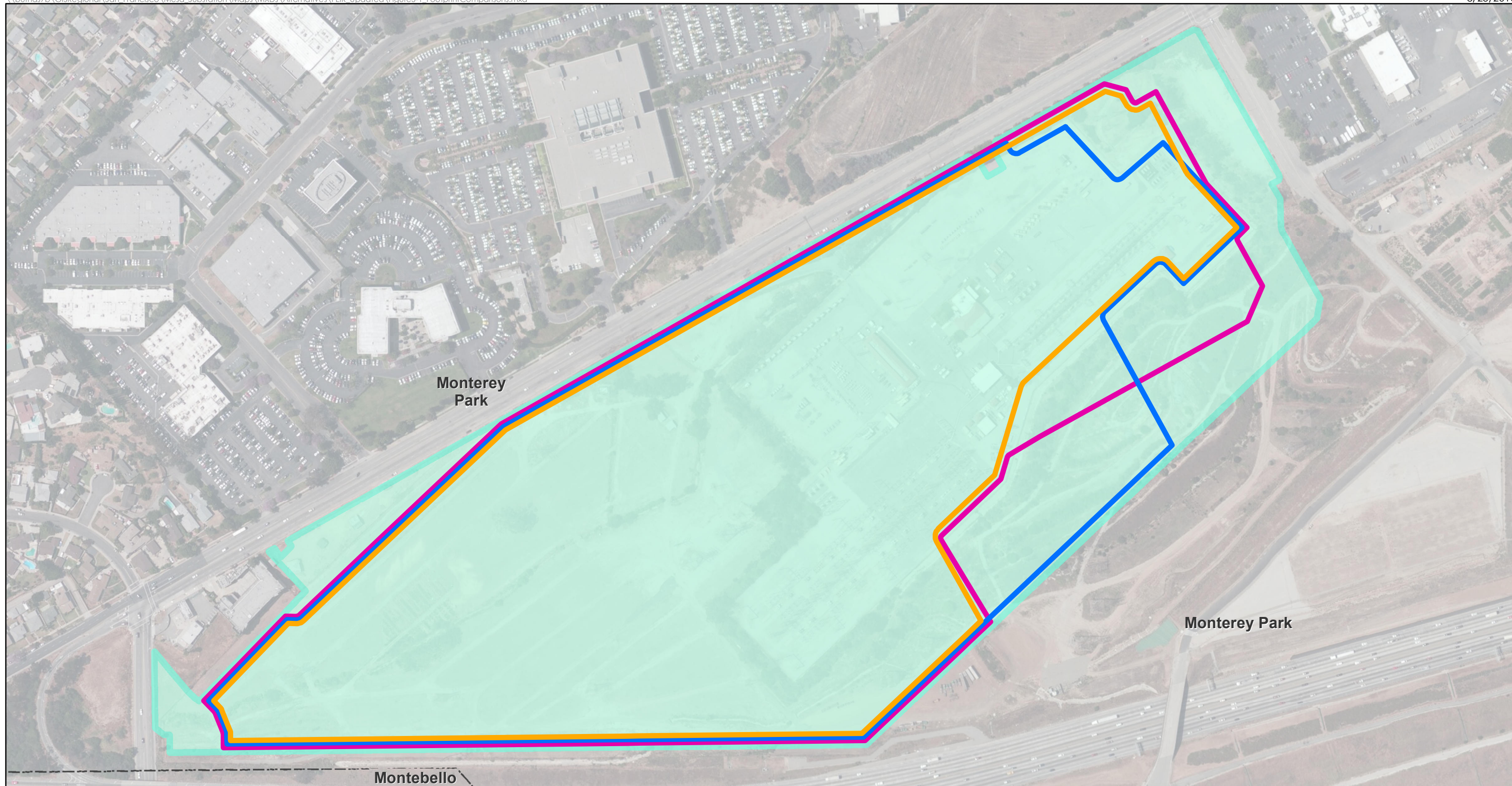
9  
10 Table 5.3-3 summarizes the comparison of alternatives analysis and determinations. It also  
11 provides a ranking of the alternatives within the environmental resource area, from  
12 environmentally superior (1) to least environmentally superior (3). A ranking is not provided when  
13 the impacts of each alternative would be comparable.  
14

15 **5.3.2.1 One-Transformer-Bank (1600 MVA) Substation Alternative**

16  
17 **Aesthetics**

18 Construction of the One-Transformer-Bank Substation Alternative would result in slightly reduced  
19 aesthetic impacts. The 500-kV switchrack would be about half the size of the switchrack for the  
20 proposed projects, which would result in fewer structures at the substation visible from viewpoints  
21 on Potrero Grande Drive. Fewer structures associated with the One-Transformer-Bank Substation  
22 Alternative, when compared to the proposed project, would result in less of an increase in contrast  
23 and less of a decrease of intactness and unity of views when compared to the proposed project.  
24 However, the transformer bank and 500-kV switchrack would be located adjacent to Potrero  
25 Grande Drive, closer to viewers, meaning that the new substation structures would still be visually  
26 dominant. The reduction in visual impacts (Impact AE-1) would be slight compared to the proposed  
27 project's visual impacts.  
28

29 All other visual impacts of the One-Transformer-Bank Substation Alternative would be the same as  
30 those associated with the proposed project.  
31  
32

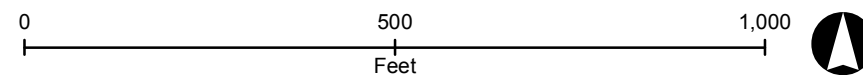


Rough Schematics of Alternative Footprints

- One 1600-MVA Transformer
- GIS Alternative Footprint
- Two 1120-MVA Transformer
- SCE Proposed Project Substation Boundary
- City boundary

Sources: SCE 2016  
Basemap: NAIP 2014

Figure 5-1  
**Comparison of  
Alternative Footprints**  
Main Project Area -  
Mesa Substation Site  
Los Angeles County, CA



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Table 5.3-3 Summary of the Alternatives Analyses and Determinations

Resource Area	Proposed Project (Determinations for Impacts Reduced by Alternatives)	One-Transformer-Bank (1600 MVA) Substation (Rank <sup>(1)</sup> )	Two-Transformer-Bank (1120 MVA) Substation (Rank <sup>(1)</sup> )	Gas-Insulated Substation (Rank <sup>(1)</sup> )	Environmentally Superior Alternative <sup>(2)</sup>
Aesthetics	<ul style="list-style-type: none"> <li>• <b>Impact AE-1</b> (significant and unavoidable)</li> </ul>	Less (2)	Less (3)	Less (1)	Gas-Insulated Substation
Air Quality	<ul style="list-style-type: none"> <li>• <b>Impact AQ-2</b> (significant and unavoidable)</li> <li>• <b>Impact AQ-3</b> (less than significant with mitigation)</li> </ul>	Less (1)	Less (2)	Less (3)	One-Transformer-Bank Substation
Biological Resources	<ul style="list-style-type: none"> <li>• <b>Impact BR-1</b> (less than significant with mitigation)</li> <li>• <b>Impact BR-2</b> (less than significant with mitigation)</li> <li>• <b>Impact BR-3</b> (less than significant with mitigation)</li> <li>• <b>Impact BR-4</b> (less than significant with mitigation)</li> </ul>	Less (1)	Less (2)	Less (3)	One-Transformer-Bank Substation
Cultural Resources	<ul style="list-style-type: none"> <li>• <b>Impact CR-2</b> (less than significant with mitigation)</li> </ul>	Less (1)	Less (2)	Less (3)	One-Transformer-Bank Substation
Geology, Soils, and Mineral Resources	<ul style="list-style-type: none"> <li>• <b>Impact GEO-5</b> (less than significant with mitigation)</li> </ul>	Less (1)	Less (2)	Less (3)	One-Transformer-Bank Substation
Greenhouse Gas Emissions	<ul style="list-style-type: none"> <li>• <b>Impact GHG-1</b> (less than significant) <u>N/A—No impact reduced by alternatives</u></li> </ul>	Less (1) <u>Similar (N/A)</u>	Less (1) <u>Similar (N/A)</u>	Greater (3) <u>N/A</u>	<del>One-Transformer-Bank Substation</del> <u>None</u>

Table 5.3-3 Summary of the Alternatives Analyses and Determinations

Resource Area	Proposed Project (Determinations for Impacts Reduced by Alternatives)	One-Transformer-Bank (1600 MVA) Substation (Rank <sup>(1)</sup> )	Two-Transformer-Bank (1120 MVA) Substation (Rank <sup>(1)</sup> )	Gas-Insulated Substation (Rank <sup>(1)</sup> )	Environmentally Superior Alternative <sup>(2)</sup>
Hazards and Hazardous Materials	<ul style="list-style-type: none"> <li>• <b>Impact HZ-1</b> (less than significant with mitigation)</li> <li>• <b>Impact HZ-2</b> (less than significant with mitigation)</li> <li>• <b>Impact HZ-4</b> (less than significant with mitigation)</li> </ul>	Less (1)	Less (2)	Less (3)	One-Transformer-Bank Substation
Hydrology and Water Quality	<ul style="list-style-type: none"> <li>• <b>Impact HY-1</b> (less than significant with mitigation)</li> <li>• <b>Impact HY-2</b> (less than significant)</li> <li>• <b>Impact HY-3</b> (less than significant with mitigation)</li> <li>• <b>Impact HY-4</b> (less than significant with mitigation)</li> </ul>	Less (1)	Less (2)	Less (3)	One-Transformer-Bank Substation
Land Use and Planning	<ul style="list-style-type: none"> <li>• N/A—No Impact</li> </ul>	Similar (N/A)	Similar (N/A)	Similar (N/A)	Equal <sup>3-4</sup>
Noise	<ul style="list-style-type: none"> <li>• <del>Impact NV-4 (significant and unavoidable)</del> N/A—No impact reduced by alternatives</li> </ul>	Less (2) Similar (N/A)	Less (2) Similar (N/A)	Less (1) Similar (N/A)	Gas-Insulated Substation Equal <sup>4</sup>
Population and Housing	<ul style="list-style-type: none"> <li>• N/A—No Impact</li> </ul>	Less Similar (N/A)	Less Similar (N/A)	Less Similar (N/A)	Equal <sup>4</sup> ly superior <sup>3-5</sup>
Public Services and Utilities	<ul style="list-style-type: none"> <li>• <b>Impact PSU-5</b> (less than significant)</li> </ul>	Less (1)	Less (2)	Less (3)	One-Transformer-Bank Substation
Recreation	<ul style="list-style-type: none"> <li>• N/A—No Impact</li> </ul>	Similar (N/A)	Similar (N/A)	Similar (N/A)	Equal <sup>3-4</sup>



Table 5.3-3 Summary of the Alternatives Analyses and Determinations

Resource Area	Proposed Project (Determinations for Impacts Reduced by Alternatives)	One-Transformer-Bank (1600 MVA) Substation (Rank <sup>(1)</sup> )	Two-Transformer-Bank (1120 MVA) Substation (Rank <sup>(1)</sup> )	Gas-Insulated Substation (Rank <sup>(1)</sup> )	Environmentally Superior Alternative <sup>(2)</sup>
Transportation and Traffic	<ul style="list-style-type: none"> <li>• <b>Impact TT-1</b> (less than significant with mitigation)</li> <li>• <b>Impact TT-2</b> (less than significant with mitigation)</li> </ul> <p><u>N/A—No impact reduced by alternatives</u></p>	Less (1) Greater (N/A)	Less (2) Greater (N/A)	Less (3) Greater (N/A)	One-Transformer-Bank Substation <u>None</u>

Notes:

(1) A rank is not provided if the alternatives would result in indistinguishable environmental impacts.

(2) If the Environmentally Superior Alternative is the No Project Alternative, CEQA requires the identification of an Environmentally Superior Alternative among the other alternatives (CEQA Guidelines Section 15126.6).

~~(3) All three alternatives have approximately the same environmental impact such that none are superior to the other considered alternatives but are superior to the proposed project.~~

(4) All three alternatives have similar impacts to the proposed project, such that no alternatives would reduce an environmental impact of the proposed project.

~~(5) All three alternatives considered are environmentally superior to the proposed project.~~

Key:

MVA megavolt amperes

N/A not applicable

1 **Air Quality**

2 Construction of the One-Transformer-Bank Substation Alternative would result in ~~total reduced~~  
3 increased air quality emissions impacts over the construction period, but reduced fugitive dust  
4 emissions, though the maximum daily emissions during construction would remain the same as for  
5 the proposed project. While the reduced substation size would require less import of materials for  
6 building the substation itself, a shorter construction period and less ground disturbance, but  
7 construction of the One-Transformer-Bank Substation Alternative would also reduce the  
8 disturbance area by excluding the Phase 3 area shown in Figure 2-4. Under the proposed project,  
9 this area was to provide some of the fill required at the substation site. Without this fill available,  
10 SCE estimates that an additional 5,000 truck trips will be needed, in total, to import soil to the site.  
11 The additional total trips would increase overall exhaust emissions, and would slightly increase the  
12 maximum number of trips per day when compared to the proposed project. it is assumed that daily  
13 construction activities would not change in intensity. It is assumed that soil import would be  
14 needed during Phase I, when general site grading would occur, which would be approximately 18  
15 months long for the proposed project. With an additional 6 months needed for soil transport, Phase  
16 I would be 24 months long. An additional 5,000 trips over Phase I of construction (24 months)  
17 equates to an average of approximately 11 truck trips per day, or 22 passenger-car-equivalent  
18 (PCE) trips, on each day of construction. Given that Phase I would have a maximum of 2,144 PCE  
19 daily trips for the proposed project, an increase of about 1 percent in trips and exhaust emissions  
20 would result in a slight increase in maximum daily quality exhaust emissions. Thus, daily maximum  
21 criteria pollutant emissions would be negligibly increased about the same under the One-  
22 Transformer-Bank Substation Alternative compared to the proposed project. However, the reduced  
23 construction period at the substation would result in an overall substantial decrease in total  
24 exhaust emissions (Impact AQ-2 and Impact AQ-3). However, the reduced disturbance area (about  
25 11.6 14.4 acres less than the proposed project) would substantially reduce fugitive dust emissions  
26 from ground disturbance (Impact AQ-2 and Impact AQ-3). Given the substantial reduction in  
27 fugitive dust and the slight increase in maximum daily exhaust emissions, there would be a slight  
28 overall reduction in air quality impacts (Impact AQ-2 and Impact AQ-3).

29  
30 All other air quality impacts under the One-Transformer-Bank Substation Alternative would be the  
31 same as those associated with the proposed project.

32  
33 **Biological Resources**

34 Construction of the One-Transformer-Bank Substation Alternative would result in reduced impacts  
35 on biological resources compared to the proposed project. ~~California e~~Coastal California  
36 gnatcatcher, least Bell's vireo, loggerhead shrike, peregrine falcon, Swainson's hawk, and yellow  
37 warbler have been sighted in the areas southeast and east of the current substation; ~~California~~  
38 coastal California gnatcatcher is known to forage and nest in the area southeast of the current  
39 substation. Under the One-Transformer-Bank Substation Alternative, about 11.6 acres of habitat  
40 southeast of the existing substation would be avoided compared to the proposed projects. This  
41 habitat is also the higher-value habitat on the substation site because specialSpecial-status bird  
42 species (including nesting and foraging coastal California coastal gnatcatcher) are known to  
43 occurhave been documented within the 11.6 acres that would be avoided by this alternative within  
44 this habitat (Figure 5: Map 1 of 5, Appendix D of the Draft EIR).

45  
46 Approximately 9.5 acres that would be avoided under the One-Transformer-Bank Substation  
47 Alternative has been identified as coastal California gnatcatcher habitat. Figure 5: Map 1 of 5 of the  
48 Draft EIR's Appendix D shows numerous occurrences of coastal California gnatcatcher within the

1 avoided area, and Figure 10: Map 1 of 3 of the Draft EIR's Appendix D classifies approximately 9.5  
2 acres of the 11.6 acres that would be avoided as gnatcatcher habitat. The area that would be  
3 avoided is classified primarily as non-native vegetation (Figure 4.3-1 of the Draft EIR); however,  
4 both native and non-native vegetation in the Mesa Substation area are considered gnatcatcher  
5 habitat (Figure 10: Map 1 of 3 of the Draft EIR's Appendix D). The USFWS (Medak pers. comm.  
6 2015) expressed that the vegetation utilized by the coastal California gnatcatcher southeast of the  
7 substation, including much of the area that would be avoided by this alternative, is some of the only  
8 remaining habitat for the gnatcatcher between the Montebello Hills and the northernmost  
9 populations in the San Gabriel and Santa Susana Mountains, and thus helps to provide connectivity  
10 between gnatcatcher populations. The USFWS stated that this connectivity is "important for  
11 maintaining a viable population within the northern range of the species" and critical for achieving  
12 resiliency in response to environmental change (Medak pers. comm. 2015). Furthermore, the six  
13 black walnut trees that would be removed as part of the proposed project could be retained under  
14 this alternative. Impacts to avian and special-status species and habitat (Impact BR-1 and Impact  
15 BR-4) would be substantially reduced under the One-Transformer-Bank Substation Alternative  
16 compared to those associated with the proposed project.

17  
18 This alternative would also result in reduced impacts on riparian habitat. The mulefat scrub located  
19 southeast of the current substation site would be avoided under this alternative. This alternative  
20 would result in an approximately 27 percent (about 1 acre) reduction of impacts on potentially  
21 jurisdictional water compared to the proposed projects. The One-Transformer-Bank Substation  
22 Alternative would substantially reduce impacts on riparian habitat and potentially jurisdictional  
23 waters (Impact BR-2 and Impact BR-3) at the substation site.

24  
25 All other impacts related to biological resources under this alternative would be the same as those  
26 associated with the proposed project.

### 27 **Cultural Resources**

28  
29 The potential for discovery of a cultural resource during construction of the One-Transformer-Bank  
30 Substation Alternative would potentially be lower than for the proposed project due to reduced  
31 ground disturbance. Under this alternative, 11.6 fewer acres of land would be disturbed compared  
32 to the proposed projects. The potential for encountering a previously undiscovered resource on the  
33 site is already low. Thus, there is a negligibly lower chance of uncovering a cultural resource  
34 (Impact CR-2) with implementation of the One-Transformer-Bank Substation Alternative compared  
35 to the proposed project.

36  
37 All other impacts related to cultural resources under this alternative would be the same as those  
38 associated with the proposed project.

### 39 **Geology, Soils, and Mineral Resources**

40  
41 The potential for erosion and loss of topsoil during construction of the One-Transformer-Bank  
42 Substation Alternative would be lower than for the proposed project due to reduced ground  
43 disturbance. Under this alternative, 11.6 fewer acres of land would be disturbed compared to the  
44 proposed projects. The reduced grading and ground disturbance would therefore slightly reduce  
45 erosion (Impact GEO-5) compared to the proposed project.

46  
47 All other impacts related to geology and soils under this alternative would be the same as those  
48 associated with the proposed projects.

1  
2 **Greenhouse Gas Emissions**

3 Overall greenhouse gas emissions from construction of the One-Transformer-Bank Substation  
4 Alternative would be ~~reduced compared to~~ greater than the proposed project. The smaller  
5 substation footprint would require additional soil import due to the reduced availability of on-site  
6 soil, as described under Air Quality, which would require more ~~translate into less grading and~~  
7 ~~therefore less heavy equipment use and fewer truck trips to import and export soil.~~ Less grading  
8 would be required on site, which would reduce heavy equipment use on site. On balance, impacts  
9 would be similar to those of the proposed project, resulting in slightly reduced greenhouse gas  
10 emissions (Impact GHG-1) during construction.

11  
12 All other construction impacts related to greenhouse gases under this alternative would be the  
13 same as those associated with the proposed project. Operations-related greenhouse gas emissions  
14 under this alternative would be the same as under the proposed project, since operations and  
15 maintenance activities would be about the same as under the proposed project.

16  
17 **Hazards and Hazardous Materials**

18 Overall risk of hazards would be reduced under the One-Transformer-Bank Substation Alternative  
19 compared to the proposed projects. Under this alternative, the substation footprint would be ~~41.6~~  
20 14.4 acres smaller than under the proposed projects. The alternative would involve less ground  
21 disturbance, which means that slightly fewer hazardous materials overall would be used,  
22 transported, and disposed of; there would be slightly less chance of an accident (Impact HZ-1); and  
23 there would be slightly reduced potential for encountering contaminated soils (Impact HZ-2 and  
24 Impact HZ-4). Under this alternative, two groundwater wells slated to be decommissioned under  
25 the proposed project (wells OI-07C and OI-07B) would be retained; therefore, the potential for  
26 contamination of groundwater or soils via improper well abandonment (Impact HZ-2) would be  
27 slightly reduced under the One-Transformer-Bank Substation Alternative.

28  
29 During operations, there would be only one transformer bank on site. The proposed project would  
30 result in an increase of 166,000 gallons of transformer oil being used on site for the 500-kV portion  
31 of the new substation, distributed among three transformer banks. Under the One-Transformer-  
32 Bank Substation Alternative, there may be more or the same amount of oil in any given transformer  
33 compared to the proposed project, depending on the manufacturer of the 1600-MVA transformer  
34 bank. Therefore, a potential spill under this alternative could release more or the same amount of  
35 oil than a potential spill involving one of the transformers under the proposed project. A spill is  
36 highly unlikely. Impacts during operation and maintenance may therefore be the same or negligibly  
37 greater than the proposed project. With only one 1600-MVA transformer, about one-third of the  
38 transformer oil (about 55,000 gallons) would be needed under this alternative than under the  
39 proposed project. Thus, there would be less oil stored on site under the One-Transformer-Bank  
40 Substation Alternative than under the proposed project, substantially reducing associated potential  
41 hazards (Impact HZ-1). On balance, the slight reduction in hazards during construction and  
42 negligibly greater or similar impacts during operation and maintenance would result in a slight  
43 overall decrease in hazards impacts under the One-Transformer-Bank Substation Alternative.

44  
45 All other impacts related to hazards and hazardous materials under this alternative would be the  
46 same as those associated with the proposed projects.

1 **Hydrology and Water Quality**

2 Overall risk of water pollution would be slightly reduced under the One-Transformer-Bank  
3 Substation Alternative compared to the proposed project. The alternative would involve 11.6 acres  
4 less ground disturbance compared to the proposed project and would reduce impacts on the  
5 drainages southeast and east of the existing substation site. This alternative would result in an  
6 approximately 27 percent reduction of impacts on potentially jurisdictional water compared to the  
7 proposed project. This reduced disturbance area would result in a slightly reduced potential for  
8 sedimentation and hazardous materials spills that could adversely affect water quality (Impact  
9 HY-1 and Impact HY-3), and impacts on drainage patterns, including ponding both on and off site  
10 (Impact HY-4).

11  
12 The smaller disturbance area associated with the One-Transformer-Bank Substation Alternative  
13 would require less water for dust control during construction than the proposed project. This  
14 alternative would reduce ground disturbance by about 17 percent, which may also reduce water  
15 use for dust control at the substation site by 17 percent. The applicant would obtain water from  
16 Monterey Park Department of Public Works Water Utility Division, which sources water from  
17 groundwater. Thus, slightly less groundwater would be used (Impact HY-2) under the One-  
18 Transformer-Bank Substation Alternative than under the proposed project.

19  
20 All other impacts related to hydrology and water quality under this alternative would be the same  
21 as those associated with the proposed project.

22  
23 **Land Use and Planning**

24 The proposed project would have no impact on land use and planning. Because this alternative  
25 would involve a reduced substation in the same location, it would have no impact on land use and  
26 planning.

27  
28 **Noise**

29 Noise from the proposed project may be reduced under the One-Transformer-Bank Substation  
30 Alternative because less construction would take place close to sensitive receptors on Holly Oak  
31 Drive. The One-Transformer-Bank Substation Alternative would increase the distance of the  
32 substation construction activities to the nearest sensitive receptors on Holly Oak Drive by  
33 approximately 170 feet. Thus, noise impacts at these receptors would be reduced by about 2 A-  
34 weighted decibels (dBA). Reduction in noise by 2 dBA would not result in a perceptible difference  
35 in noise levels. Construction of the One-Transformer-Bank Substation Alternative would negligibly  
36 ~~reduce noise impacts~~ be similar (Impact NV-4) ~~compared~~ to the impacts of the proposed project.

37  
38 All other impacts related to noise under this alternative would be the same as those associated with  
39 the proposed project.

40  
41 **Population and Housing**

42 It is presumed that the same maximum number of employees would be needed during construction  
43 under this alternative as under the proposed project. The duration of need for workers would,  
44 however, be ~~shorter~~ about 6 months longer than under the proposed project, as discussed under  
45 Air Quality. This could result in a negligible increase in ~~reduction of~~ the potential for temporary  
46 population growth in the area, compared to the proposed project, should construction workers

1 relocate to the area. The impacts of this alternative and the proposed project would be substantially  
2 the same.

3  
4 All other impacts related to population and housing would be the same as those associated with the  
5 proposed project.

### 6 7 **Public Services and Utilities**

8 The One-Transformer-Bank Substation Alternative would have a negligibly ~~increased~~ reduced  
9 potential for need for public services due to hazardous materials spills, fire, theft, and vandalism, as  
10 well as lower production of wastewater and storm water as a function of the ~~longer~~ shorter  
11 construction period at the substation site, ~~as discussed previously under Air Quality, and the~~  
12 ~~reduced construction activity and substation footprint compared to the proposed project.~~ Impacts  
13 would be substantially the same as the proposed project.

14  
15 The smaller disturbance area associated with the One-Transformer-Bank Substation Alternative  
16 would require less water for dust control during construction than the proposed project. This  
17 alternative would reduce ground disturbance by about ~~17~~ 20 percent, which may also reduce water  
18 use for dust control (Impact PSU-5) at the substation by ~~17~~ 20 percent.

19  
20 All other impacts related to public services and utilities would be the same as those associated with  
21 the proposed project.

### 22 23 **Recreation**

24 It is presumed that the same maximum number of employees would be needed during construction  
25 of this alternative as for the proposed project. The duration of need for workers would, however, be  
26 slightly ~~longer~~ shorter than for the proposed project, ~~as previously discussed under Air Quality,~~  
27 resulting in a small potential ~~increase~~ decrease in the time that workers may need to relocate to the  
28 area. Thus, any increased use in recreational facilities due to temporary relocation of construction  
29 workers to the area could be negligibly ~~increased~~ reduced under the One-Transformer-Bank  
30 Substation Alternative compared to the proposed project. The impacts of this alternative and the  
31 proposed project would be substantially the same.

32  
33 All other impacts related to recreation under this alternative would be the same as those associated  
34 with the proposed project.

### 35 36 **Traffic and Transportation**

37 Construction of the One-Transformer-Bank Substation Alternative would result in ~~reduced~~  
38 ~~increased~~ total vehicle trips during construction, ~~though the maximum daily vehicle trips would~~  
39 ~~most likely remain the same as under the proposed project. The reduced substation size would~~  
40 ~~result in a shorter construction period and less grading, resulting in fewer soil import and export~~  
41 ~~trips; The One-Transformer-Bank Substation Alternative would exclude from the disturbance area~~  
42 ~~the Phase 3 area shown in Figure 2-4, which, under the proposed project was to provide some of~~  
43 ~~the fill required at the substation site. Without this fill available, SCE estimates that an additional~~  
44 ~~5,000 truck trips will be needed during construction, in total, to import soil to the site. but it is~~  
45 ~~assumed that daily construction activities would not change in intensity. Thus, daily vehicle trips~~  
46 ~~would be about the same under this alternative compared to the proposed project. However, the~~  
47 ~~reduced construction period at the substation under the One-Transformer-Bank Substation~~  
48 ~~Alternative would result in a net overall substantial decrease in traffic and transportation impacts~~

1 (Impact TT-1 and Impact TT-2). The increased needs for soil import would prolong the  
2 construction period by about 6 months, as import of soil is more time consuming than transferring  
3 soil within the project area. It is assumed that the additional time would be allocated to the 18-  
4 month-long Phase I of construction because it is when general grading would occur. An additional  
5 5,000 trips over 24 months of Phase I construction would equate to an average of approximately 11  
6 truck trips per day. Applying a passenger car equivalent (PCE) of 2, this equates to 22 one-way PCE  
7 trips per day for 24 months. Given that Phase I would have a maximum of 2,144 PCE daily trips for  
8 the proposed project, there would be an increase of about 1 percent in trips under the One-  
9 Transformer-Bank Substation Alternative. This would represent a slight increase in traffic impacts,  
10 which would not affect the analysis or conclusions in the Draft EIR.

11  
12 All other impacts related to traffic and transportation under this alternative would be the same as  
13 those associated with the proposed project.

### 14 15 **5.3.2.2 Two-Transformer-Bank (1120 MVA) Substation Alternative**

#### 16 17 **Aesthetics**

18 Construction of the Two-Transformer-Bank Substation Alternative would result in reduced  
19 aesthetic impacts compared to the proposed project. The 500-kV switchrack would be a little more  
20 than half the size of the switchrack for the proposed project, which would result in fewer structures  
21 at the substation visible from viewpoints on Potrero Grande Drive. However, the transformer banks  
22 and 500-kV switchrack would be located adjacent to Potrero Grande Drive, closer to viewers,  
23 meaning that the new substation structures would still be visually dominant. The reduction in  
24 visual impacts (Impact AE-1) would be slight compared to the proposed project's visual impacts.

25  
26 All other visual impacts of the Two-Transformer-Bank Substation Alternative would be the same as  
27 those associated with the proposed project.

#### 28 29 **Air Quality**

30 Construction of the Two-Transformer-Bank Substation Alternative would result in ~~total reduced~~  
31 increased air quality exhaust emissions impacts over the construction period, but reduced fugitive  
32 dust emissions, though the maximum daily emissions during construction would remain the same  
33 as under the proposed project. While the reduced substation size would ~~require result in less~~  
34 import of materials for building the substation itself, a shorter construction period and less ground  
35 disturbance, but construction of the Two-Transformer- Bank Substation Alternative would also  
36 exclude from the disturbance area much of the Phase 3 area shown in Figure 2-4. Under the  
37 proposed project, this area was to provide some of the fill required at the substation site. Without  
38 this fill available, an estimated additional 3,575 truck trips would be needed, in total, to import soil  
39 to the site. The additional total trips would increase overall exhaust emissions, and would slightly  
40 increase the maximum number of trips per day when compared to the proposed project. it is  
41 assumed that daily construction activities would not change in intensity. It is assumed that soil  
42 import would be needed during Phase I, since that is when grading would take place, which would  
43 be approximately 18 months long for the proposed project. With an additional 4.5 months needed  
44 for soil transport, Phase I would be 22.5 months long. An additional 3,575 trips over an additional  
45 4.5 months of construction equates to an average of approximately 8 truck trips per day, or 16 PCE  
46 trips, on each day of construction. Given that Phase I would have a maximum of 2,144 PCE daily  
47 trips, an increase in trips and exhaust emissions of less than 1 percent would result in a negligible  
48 increase in maximum daily exhaust emissions. Thus, daily maximum criteria pollutant emissions

1 would be ~~about the same~~ negligibly increased under the Two-Transformer-Bank Substation  
2 Alternative compared to the proposed project. ~~However, the reduced construction period at the~~  
3 ~~substation would result in a net overall substantial decrease in total exhaust emissions (Impact AQ-~~  
4 ~~2 and Impact AQ-3).~~ The reduced disturbance area (about 11 acres less than the proposed project)  
5 would substantially reduce fugitive dust emissions from ground disturbance (Impact AQ-2 and  
6 Impact AQ-3). Overall, there would be a slight reduction in air quality impacts.

7  
8 All other air quality impacts under the Two-Transformer-Bank Substation Alternative would be the  
9 same as those associated with the proposed project.

## 10 11 **Biological Resources**

12 Construction of the Two-Transformer-Bank Substation Alternative would result in reduced impacts  
13 on biological resources compared to the proposed project. ~~California e~~Coastal California  
14 gnatcatcher, least Bell's vireo, loggerhead shrike, peregrine falcon, Swainson's hawk, and yellow  
15 warbler have been sighted in the areas southeast and east of the current substation; California  
16 coastal California gnatcatcher is known to forage and nest in the area southeast of the current  
17 substation. Under the Two-Transformer-Bank Substation Alternative, approximately 8.3 acres of  
18 habitat southeast of the existing substation would be avoided compared to the proposed project.  
19 ~~This habitat is higher value habitat on the substation site because special~~Special-status bird species  
20 ~~(including nesting/foraging coastal California-coastal gnatcatcher) are known to occur have been~~  
21 documented within the approximately 8.3 acres that would be avoided within this habitat (Figure  
22 5: Map 1 of 5, Appendix D of the Draft EIR).

23  
24 Approximately 6.5 acres of the 8.3 acres that would be avoided under the Two-Transformer-Bank  
25 Substation Alternative has been identified as coastal California gnatcatcher habitat. Figure 5: Map 1  
26 of 5 of the Draft EIR's Appendix D shows numerous occurrences of coastal California gnatcatcher  
27 within the avoided area, and Figure 10: Map 1 of 3 of the Draft EIR's Appendix D classifies  
28 approximately 6.5 acres that would be avoided as gnatcatcher habitat. The area that would be  
29 avoided is classified primarily as non-native vegetation (Figure 4.3-1 of the Draft EIR); however,  
30 both native and non-native vegetation in the Mesa Substation area are considered gnatcatcher  
31 habitat (Figure 10: Map 1 of 3 of the Draft EIR's Appendix D). The USFWS (Medak pers. comm.  
32 2015) expressed that the vegetation utilized by the coastal California gnatcatcher southeast of the  
33 substation, including much of the area that would be avoided by this alternative, is some of the only  
34 remaining habitat for the gnatcatcher between the Montebello Hills and the northernmost  
35 populations in the San Gabriel and Santa Susana Mountains, and thus helps to provide connectivity  
36 between gnatcatcher populations. The USFWS stated that this connectivity is "important for  
37 maintaining a viable population within the northern range of the species" and critical for achieving  
38 resiliency in response to environmental change (Medak pers. comm. 2015). Furthermore, the six  
39 black walnut trees that would be removed as part of the proposed project could be retained under  
40 this alternative. Impacts on avian and special-status species and habitat (Impact BR-1 and Impact  
41 BR-4) would be substantially reduced under the Two-Transformer-Bank Substation Alternative  
42 compared to the proposed project.

43  
44 The Two-Transformer-Bank Substation Alternative would also result in reduced impacts on  
45 riparian habitat. This alternative would reduce the impacts on the mulefat scrub located southeast  
46 of the current substation site. This alternative would result in a 14 percent (about 0.5-acre)  
47 reduction of impacts on potentially jurisdictional water compared to the proposed project. The  
48 Two-Transformer-Bank Substation Alternative would substantially reduce impacts on riparian  
49 habitat and potentially jurisdictional waters (Impact BR-2 and Impact BR-3) at the substation site.



1  
2 All other impacts related to biological resources under this alternative would be the same as those  
3 associated with the proposed project.

4  
5 **Cultural Resources**

6 The potential for discovery of a cultural resource during construction of the Two-Transformer-  
7 Bank Substation Alternative would potentially be lower than for the proposed project due to  
8 reduced ground disturbance. Under this alternative, 8.3 fewer acres of land would be disturbed  
9 compared to the proposed project. The potential for encountering a previously undiscovered  
10 resource on the site is already low. Thus, there is a negligibly lower chance of uncovering a cultural  
11 resource (Impact CR-2) with implementation of the Two-Transformer-Bank Substation Alternative  
12 compared to the proposed project.

13  
14 All other impacts related to cultural resources under this alternative would be the same as those  
15 associated with the proposed project.

16  
17 **Geology, Soils, and Mineral Resources**

18 The potential for erosion and loss of topsoil during construction of the Two-Transformer-Bank  
19 Substation Alternative would be lower than for the proposed project due to reduced ground  
20 disturbance. Under this alternative, 8.3 fewer acres of land would be disturbed compared to the  
21 proposed project. The reduced grading and ground disturbance would therefore slightly reduce  
22 erosion (Impact GEO-5) compared to the proposed project.

23  
24 All other impacts related to geology and soils under this alternative would be the same as those  
25 associated with the proposed project.

26  
27 **Greenhouse Gas Emissions**

28 Overall greenhouse gas emissions from construction of the Two-Transformer-Bank Substation  
29 Alternative would be ~~reduced compared to~~ greater than the proposed project. The smaller  
30 substation footprint would require additional soil import due to the reduced availability of on-site  
31 soil, as described under Air Quality, which would require more ~~translate into less grading and~~  
32 ~~therefore less heavy equipment use and fewer truck trips to import and export soil.~~ Less grading  
33 would be required on site, which would reduce heavy equipment on site. On balance, impacts  
34 would be similar to those of the proposed project, resulting in slightly reduced greenhouse gas  
35 emissions (Impact GHG-1) during construction.

36  
37  
38 All other construction impacts related to greenhouse gases under this alternative would be the  
39 same as those associated with the proposed project. Operations-related greenhouse gas emissions  
40 would be the same as under the proposed projects, since operations and maintenance activities  
41 would be about the same as those performed for the proposed project.

42  
43 **Hazards and Hazardous Materials**

44 Overall risk of hazards would be reduced under the Two-Transformer-Bank Substation Alternative  
45 compared to the proposed project. Under this alternative, the substation footprint would be ~~8.3~~ 11  
46 acres smaller than that associated with the proposed project. The alternative would involve less  
47 ground disturbance, which means that slightly fewer hazardous materials overall would be used,

1 transported, and disposed of; there would be slightly less of a chance of an accident (Impact HZ-1);  
2 and there would be slightly reduced potential for encountering contaminated soils (Impact HZ-2  
3 and Impact HZ-4).

4  
5 During operations, there would be only two transformer banks on site. The proposed project would  
6 result in an increase of 166,000 gallons of transformer oil being used on site for the 500-kV portion  
7 of the new substation. With only two 1120-MVA transformers, about two-thirds of the transformer  
8 oil (about 110,000 gallons) would be needed under this alternative than under the proposed  
9 project. Thus, there would be less oil stored on site under the Two-Transformer-Bank Substation  
10 Alternative than under the proposed project. However, the same amount of oil would be used in  
11 each transformer, leaving the potential size of spill the same as the proposed project. Impacts  
12 (Impact HZ-1) would be similar to the proposed project, substantially reducing associated potential  
13 hazards (Impact HZ-1).

14  
15 All other impacts related to hazards and hazardous materials under this alternative would be the  
16 same as those associated with the proposed project.

### 17 **Hydrology and Water Quality**

18  
19 Overall risk of water pollution would be slightly reduced under the Two-Transformer-Bank  
20 Substation Alternative compared to the proposed project. The alternative would involve 8.3 acres  
21 less ground disturbance compared to the proposed project and would reduce impacts on the  
22 drainages southeast and east of the existing substation site. This alternative would result in a  
23 reduction of about 14 percent in impacts on potentially jurisdictional waters compared to the  
24 proposed project. This reduced area would result in a slightly reduced potential for sedimentation  
25 and hazardous materials spills that could adversely affect water quality (Impact HY-1 and Impact  
26 HY-3) and drainage patterns, including ponding on and off site (Impact HY-4).

27  
28 The smaller disturbance area associated with the Two-Transformer-Bank Substation Alternative  
29 would require less water for dust control during construction than the proposed project. This  
30 alternative would reduce ground disturbance by about 12 percent, which could also reduce water  
31 use for dust control at the substation site by 12 percent. The applicant would obtain water from  
32 Monterey Park Department of Public Works Water Utility Division, which sources water from  
33 groundwater. Thus, slightly less groundwater would be used (Impact HY-2) under the Two-  
34 Transformer-Bank Substation Alternative than under the proposed project.

35  
36 All other impacts related to hydrology and water quality under this alternative would be the same  
37 as those associated with the proposed project.

### 38 **Land Use and Planning**

39  
40 The proposed project would have no impact on land use and planning. Because this alternative  
41 would involve a reduced substation in the same location, it would also have no impact on land use  
42 and planning.

### 43 **Noise**

44  
45 Noise from the proposed projects may be reduced under the Two-Transformer-Bank Substation  
46 Alternative because less construction would take place close to sensitive receptors on Holly Oak  
47 Drive. The Two-Transformer-Bank Substation Alternative would increase the distance of the  
48 substation construction activities to the nearest sensitive receptors on Holly Oak Drive by

1 approximately 170 feet. Thus, noise impacts at these receptors would be reduced by about 2 dBA.  
2 Reduction in noise by 2 dBA would not result in a perceptible difference in noise levels.  
3 Construction of the Two-Transformer-Bank Substation Alternative would ~~negligibly reduce noise~~  
4 ~~impacts be similar~~(Impact NV-4) ~~compared~~ to the impacts of the proposed project.

5  
6 All other impacts related to noise under this alternative would be the same as those associated with  
7 the proposed project.

### 8 9 **Population and Housing**

10 It is presumed that the same maximum number of employees would be needed during construction  
11 of this alternative as the proposed project. The duration of need for workers would, however, be  
12 ~~shorter~~ about 4.5 months longer than for the proposed project, as discussed under Air Quality. This  
13 could result in a negligible ~~reduction of~~ increase in the potential for temporary population growth  
14 in the area, compared to the proposed project, should construction workers relocate to the area.  
15 The impacts of this alternative and the proposed project would be substantially the same.

16  
17 All other impacts related to population and housing would be the same as those associated with the  
18 proposed project.

### 19 20 **Public Services and Utilities**

21 The Two-Transformer-Bank Substation Alternative would have a negligibly ~~increased~~ ~~reduced~~  
22 potential for need for public services due to hazardous materials spills, fire, theft, and vandalism, as  
23 well as lower production of wastewater and storm water as a function of the ~~longer~~ ~~shorter~~  
24 construction period at the substation site, as discussed previously under Air Quality, ~~and the~~  
25 ~~reduced construction activity and substation footprint compared to the proposed project~~. Impacts  
26 would be substantially the same as the proposed project.

27  
28 The smaller disturbance area associated with the Two-Transformer-Bank Substation Alternative  
29 would require less water for dust control during construction than the proposed project. This  
30 alternative would reduce ground disturbance by about ~~12~~ 15 percent, which may also reduce water  
31 use for dust control (Impact PSU-5) at the substation by ~~12~~ 15 percent.

32  
33 All other impacts related to public services and utilities would be the same as those associated with  
34 the proposed project.

### 35 36 **Recreation**

37 It is presumed that the same maximum number of employees would be needed during construction  
38 of this alternative as for the proposed project. The duration of need for workers would, however, be  
39 slightly ~~longer~~ ~~shorter~~ than for the proposed project, as previously discussed under Air Quality,  
40 resulting in a small potential ~~increase~~ ~~decrease~~ in the time that workers may need to relocate to the  
41 area. Thus, any increased use in recreational facilities due to temporary relocation of construction  
42 workers to the area could be negligibly ~~increased~~ ~~reduced~~ under the Two-Transformer-Bank  
43 Substation Alternative compared to the proposed project. The impacts of this alternative and the  
44 proposed project would be substantially the same.

45  
46 All other impacts related to recreation under this alternative would be the same as those associated  
47 with the proposed project.

1 **Transportation and Traffic**

2 Construction of the Two-Transformer-Bank Substation Alternative would result in increased total  
3 reduced vehicle trips during construction, though the maximum daily vehicle trips would most  
4 likely remain the same as for the proposed project. The reduced substation size would result in a  
5 shorter construction period and less grading, resulting in fewer soil import and export trips. The  
6 Two-Transformer Bank Substation Alternative would exclude from the disturbance area much of  
7 the Phase 3 area shown in Figure 2-4, which, under the proposed project, was to provide some of  
8 the fill required at the substation site. Without this fill available, it is estimated that an additional  
9 3,575 truck trips would be needed during construction, in total, to import soil to the site. but it is  
10 assumed that daily construction activities would not change in intensity. Thus, daily vehicle trips  
11 would be about the same under this alternative compared to the proposed project. However, the  
12 reduced construction period at the substation under the Two-Transformer-Bank Substation  
13 Alternative would result in an overall substantial decrease in traffic impacts (Impact TT-1 and  
14 Impact TT-2). The increased need for soil import would prolong the construction period by about  
15 4.5 months, as import of soil is more time consuming than transferring soil within the project area.  
16 It is assumed that the additional time would be allocated to the 18-month long Phase I of  
17 construction because that is when general grading of the site would take place. An additional 3,575  
18 trips over an additional 4.5 months of construction of Phase I equates to an average of  
19 approximately 8 truck trips per day. Applying a passenger car equivalent (PCE) of 2, this equates to  
20 16 one-way PCE trips per day for 4.5 months. Given that Phase I would have a maximum of 2,144  
21 PCE daily trips, an increase in trips of less than 1 percent would result in a negligible increase in  
22 maximum daily trips.

23  
24 All other impacts related to traffic and transportation under this alternative would be the same as  
25 those associated with the proposed project.

26  
27 **5.3.2.3 Gas-Insulated Substation Alternative**

28  
29 **Aesthetics**

30 Construction of the Gas-Insulated Substation Alternative would result in reduced aesthetic impacts.  
31 The 500-kV, 220-kV, 66-kV, and 12-kV switchracks would be about one-tenth the size of the  
32 switchracks for the proposed project, which would result in fewer structures at the substation  
33 visible from viewpoints on Potrero Grande Drive. Since the proposed projects' switchracks have tall  
34 structures that would result in visual impacts from skylining and visual dominance, reducing the  
35 size of the switchracks would substantially reduce visual impacts from the switchracks (Impact  
36 AE-1) compared to the proposed project.

37  
38 All other impacts related to visual resources during construction and operation of the proposed  
39 project would be the same for this alternative.

40  
41 **Air Quality**

42 Construction of the Gas-Insulated Substation Alternative would result in reduced total increased air  
43 quality exhaust emissions impacts over the construction period, but reduced fugitive dust  
44 emissions, though the maximum daily emissions during construction would remain the same as for  
45 the proposed project. While the reduced substation size would require result in less import of  
46 materials for building the substation itself, a shorter construction period and less ground  
47 disturbance, but construction of the Gas-Insulated Substation Alternative would exclude from the  
48 disturbance area much of the Phase 3 area shown in Figure 2-4. Under the proposed project, this

1 area was to provide some of the fill required at the substation site. Without this fill available, an  
2 additional 3,150 truck trips would be needed, in total, to import soil to the site. The additional trips  
3 would increase overall exhaust emissions, and would increase the maximum number of trips per  
4 day when compared to the proposed project. it is assumed that daily construction activities would  
5 not change in intensity. It is assumed that soil import would be needed during Phase I, when  
6 general grading would occur, which would be about 18 months long for the proposed project. With  
7 an additional 4 months needed for soil transport, Phase I would be 22 months long. An additional  
8 3,150 trips over an additional 4 months of construction equates to an average of approximately 7  
9 truck trips per day, or 14 PCE trips, on each day of construction. Given that Phase I would have a  
10 maximum of 2,144 PCE daily trips, an increase in trips and exhaust emissions of less than 1 percent  
11 would result in a negligible increase in maximum daily exhaust emissions. Thus, maximum daily  
12 criteria pollutant emissions would be negligibly higher under the Gas-Insulated Substation  
13 Alternative as for the proposed project. However, the reduced construction period at the substation  
14 would result in a net overall substantial decrease in exhaust emissions (Impact AQ-2 and Impact  
15 AQ-3). The reduced disturbance area (about 10 acres less than the proposed project) would  
16 substantially reduce fugitive dust emissions from ground disturbance (Impact AQ-2 and Impact AQ-  
17 3). Overall, there would be a moderate reduction in air quality impacts.

18  
19 All other impacts related to air quality under this alternative would be the same as those associated  
20 with the proposed project.

## 21 **Biological Resources**

22  
23 Construction of the Gas-Insulated Substation Alternative would result in reduced impacts on  
24 biological resources compared to the proposed project. The reduced substation footprint would  
25 avoid biological resources that the proposed project would impact. ~~California~~ Coastal California  
26 gnatcatcher, least Bell's vireo, loggerhead shrike, peregrine falcon, Swainson's hawk, and yellow  
27 warbler have been sighted in the areas southeast and east of the current substation; California  
28 coastal California gnatcatcher is known to forage and nest in the area southeast of the current  
29 substation. Under the Gas-Insulated Substation Alternative, about 7.3 fewer acres of habitat would  
30 be avoided compared to the proposed project. This habitat is also part of the higher-value habitat  
31 on the substation site because many of special Special-status bird species (including nesting and  
32 foraging coastal California-coastal gnatcatcher) are known to occur within this habitat have been  
33 documented within the approximately 7.3 acres (Figure 5: Map 1 of 5, Appendix D of the Draft EIR).

34  
35 Approximately 4.2 acres of the 7.3 acres that would be avoided under the Gas-Insulated Substation  
36 Alternative has been identified as coastal California gnatcatcher habitat. Figure 5: Map 1 of 5 of the  
37 Draft EIR's Appendix D shows numerous occurrences of coastal California gnatcatcher within the  
38 area avoided, and Figure 10: Map 1 of 3 of the Draft EIR's Appendix D classifies approximately 4.2  
39 acres that would be avoided as gnatcatcher habitat. The area that would be avoided is classified  
40 primarily as non-native vegetation (Figure 4.3-1 of the Draft EIR); however, both native and non-  
41 native vegetation in the Mesa Substation area are considered gnatcatcher habitat (Figure 10: Map 1  
42 of 3 of the Draft EIR's Appendix D). The USFWS (Medak pers. comm. 2015) expressed that the  
43 vegetation utilized by the coastal California gnatcatcher southeast of the substation, including much  
44 of the area that would be avoided, is some of the only remaining habitat for the gnatcatcher  
45 between the Montebello Hills and the northernmost populations in the San Gabriel and Santa  
46 Susana Mountains, and thus helps to provide connectivity between gnatcatcher populations. The  
47 USFWS stated that this connectivity is "important for maintaining a viable population within the  
48 northern range of the species" and critical for achieving resiliency in response to environmental  
49 change (Medak pers. comm. 2015). Furthermore, three of the six black walnut trees on the

1 substation site that would be removed as part of the proposed project could likely be retained  
2 under this alternative. Impacts to avian and special-status species and habitat (Impact BR-1 and  
3 Impact BR-4) would be substantially reduced under the Gas-Insulated Substation Alternative  
4 compared to the proposed project.

5  
6 This alternative would also result in reduced impacts on riparian habitat. A portion of the mulefat  
7 scrub located southeast of the current substation site would be avoided under this alternative. This  
8 alternative would result in an approximately 24 percent (about 0.9 acre) reduction of impacts on  
9 potentially jurisdictional water compared to the proposed project. The Gas-Insulated Substation  
10 Alternative would substantially reduce impacts on riparian habitat and potentially jurisdictional  
11 waters (Impact BR-2 and Impact BR-3) at the substation site.

12  
13 All other impacts related to biological resources under this alternative would be the same as those  
14 associated with the proposed project.

#### 15 **Cultural Resources**

16  
17 The potential for discovery of a cultural resource during construction of the Gas-Insulated  
18 Substation Alternative would potentially be lower under this alternative than under the proposed  
19 project due to reduced ground disturbance. Under this alternative, 7.3 fewer acres of land would be  
20 disturbed compared to the proposed project. The potential for encountering a previously  
21 undiscovered resource on the site is already low. Thus, there is a negligibly lower chance of  
22 uncovering a cultural resource (Impact CR-2) with implementation of the Gas-Insulated Substation  
23 Alternative compared to the proposed project.

24  
25 All other impacts related to cultural resources under this alternative would be the same as those  
26 associated with the proposed project.

#### 27 **Geology, Soils, and Mineral Resources**

28  
29 The potential for erosion and loss of topsoil during construction of the Gas-Insulated Substation  
30 Alternative would be lower than for the proposed project due to reduced ground disturbance.  
31 Under this alternative, 7.3 fewer acres of land would be disturbed compared to the proposed  
32 project. The reduced grading and ground disturbance would therefore slightly reduce erosion  
33 (Impact GEO-5) compared to the proposed project.

34  
35 All other impacts related to geology and soils under this alternative would be the same as those  
36 associated with the proposed project.

#### 37 **Greenhouse Gas Emissions**

38  
39 The Gas-Insulated Substation Alternative would ~~reduce be greater than the~~ greenhouse gas  
40 emissions from construction compared to the proposed project. Less grading and heavy equipment  
41 use would be required on site, which would reduce heavy equipment use on site. However, the The  
42 smaller substation footprint would require additional soil import due to the reduced availability of  
43 on-site soil, as described under Air Quality, which would require more ~~translate into less grading~~  
44 ~~and therefore less heavy equipment use and fewer truck trips to import and export soil, resulting~~  
45 ~~in~~ On balance, impacts would be similar to those of the proposed project, slightly reduced  
46 ~~greenhouse gas emissions (Impact GHG-1) during construction.~~ All other construction impacts  
47 related to greenhouse gases under this alternative would be the same as those associated with the  
48 proposed project.

1  
2 During operation, the Gas-Insulated Substation Alternative would result in increased greenhouse  
3 gas emissions (Impact GHG-1) compared to the proposed project. Gas-insulated substations use  
4 sulfur hexafluoride (SF<sub>6</sub>), which is a greenhouse gas about 23,900 times more potent than carbon  
5 dioxide. A gas-insulated substation would emit fugitive SF<sub>6</sub> due to leaking during the normal course  
6 of substation operations; a typical leak rate for new gas-insulated substations is about 0.1 percent  
7 per year (Siemens 2013). A rough estimate of the increase in greenhouse gas emissions compared  
8 to the proposed projects would be 8,200 metric tons of carbon dioxide equivalency (MTCO<sub>2e</sub>) per  
9 year.<sup>1</sup> Added to the proposed projects' annual greenhouse gas emissions of 2,129 MTCO<sub>2e</sub> per year,  
10 total annual greenhouse gas emissions for this alternative would be 10,329 MTCO<sub>2e</sub> per year. It is  
11 therefore plausible that the Gas-Insulated Substation Alternative operational greenhouse gas  
12 emissions would exceed the South Coast Air Quality Management District (SCAQMD) greenhouse  
13 gas significance threshold of 10,000 MTCO<sub>2e</sub> per year.

14  
15 Other operations-related greenhouse gas emissions would be the same as those associated with the  
16 proposed project.

### 17 **Hazards and Hazardous Materials**

18  
19 Overall risk of hazards would be reduced under the Gas-Insulated Substation Alternative compared  
20 to the proposed project. Under this alternative, the substation footprint would be 7.3 acres smaller  
21 than that under the proposed project. This alternative would involve less ground disturbance,  
22 which means that slightly fewer hazardous materials overall would be used, transported, and  
23 disposed of; there would be slightly less chance of an accident (Impact HZ-1), and there would be a  
24 slightly reduced potential for encountering contaminated soils (Impact HZ-2 and Impact HZ-4).  
25 Under this alternative, two groundwater wells slated to be decommissioned under the proposed  
26 project (wells OI-07C and OI-07B) would be retained; therefore, the potential for contamination of  
27 groundwater or soils via improper well abandonment (Impact HZ-2) would be slightly reduced  
28 under the Gas-Insulated Substation Alternative.

29  
30 All other impacts related to hazards and hazardous materials under this alternative would be the  
31 same as those associated with the proposed project.

### 32 **Hydrology and Water Quality**

33  
34 Overall risk of water pollution would be slightly reduced under the Gas-Insulated Substation  
35 Alternative compared to the proposed project. The alternative would involve 7.3 acres less ground  
36 disturbance compared to the proposed project, and would reduce impacts on the drainages  
37 southeast and east of the existing substation site. This impact would result in about a 24 percent

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<sup>1</sup> Ultimately, the amount of SF<sub>6</sub> emitted during operation of a gas-insulated substation depends on the exact gas insulated switchgear models chosen for substation equipment because leak amount is a percentage of the volume of SF<sub>6</sub> used in each piece of gas insulated switchgear. The estimate of potential SF<sub>6</sub> emissions for the Gas-Insulated Substation Alternative is based on emissions calculated for a smaller substation. A 230/69/12-kV gas-insulated substation with three switchracks with a gas-insulated substation would, in comparison to an air-insulated substation, increase operational SF<sub>6</sub> emissions by about 6,200 MTCO<sub>2e</sub> per year (CPUC 2013). Annual SF<sub>6</sub> emissions under the Gas-Insulated Substation Alternative would be even higher due to a fourth switchrack with a gas-insulated substation for the 500-kV components. Assuming that each switchyard is responsible for one-third of the 6,200 MTCO<sub>2e</sub> per year, then the 500-kV switchyard may result in another approximately 2,000 MTCO<sub>2e</sub> per year to emissions for a total increase in emissions of 8,329 MTCO<sub>2e</sub> per year compared to the proposed project.

1 reduction of impacts on potentially jurisdictional waters compared to the proposed project. This  
2 reduced disturbance area would result in a slightly reduced potential for sedimentation and  
3 hazardous materials spills that could adversely affect water quality. This reduced disturbance area  
4 would result in a slightly reduced potential for sedimentation and hazardous materials spills that  
5 could adversely affect water quality (Impact HY-1 and Impact HY-3), and impacts on drainage  
6 patterns, including ponding both on and off site (Impact HY-4).

7  
8 The smaller disturbance area associated with the Gas-Insulated Substation Alternative would  
9 require less water for dust control during construction than would the proposed project. This  
10 alternative would reduce ground disturbance by about 11 percent, which may also reduce water  
11 use for dust control at the substation site by 11 percent. The applicant would obtain water from  
12 Monterey Park Department of Public Works Water Utility Division, which sources water from  
13 groundwater. Thus, slightly less groundwater would be used (Impact HY-2) under the Gas-  
14 Insulated Substation Alternative than under the proposed project.

15  
16 All other impacts related to hydrology and water quality under this alternative would be the same  
17 as those associated with the proposed project.

#### 18 19 **Land Use and Planning**

20 The proposed project would have no impact on land use and planning. Because this alternative  
21 would involve a reduced substation in the same location, it would have no impact on land use and  
22 planning.

#### 23 24 **Noise**

25 Noise from the proposed project may be reduced under the Gas-Insulated Substation Alternative  
26 because less construction would take place close to sensitive receptors on Holly Oak Drive. The Gas-  
27 Insulated Substation Alternative would increase the distance of the substation construction  
28 activities to the nearest sensitive receptors on Holly Oak Drive by approximately 190 feet. Thus,  
29 noise impacts at these receptors would be reduced by about 2 dBA. Reduction in noise by 2 dBA  
30 would not result in a perceptible difference in noise levels. Construction of the Gas Insulated  
31 Substation Alternative would ~~negligibly reduce noise impacts~~ be similar (Impact NV-4) ~~compared~~  
32 to the impacts of the proposed project. All other impacts related to noise under this alternative  
33 would be the same as those associated with the proposed project.

#### 34 35 **Population and Housing**

36 It is presumed that the same maximum number of employees would be needed during construction  
37 of this alternative as for the proposed project. The duration of need for workers would, however, be  
38 ~~shorter~~ about 4 months longer than for the proposed project, as discussed under Air Quality. This  
39 could result in a negligible ~~reduction of~~ increase in the potential for temporary population growth  
40 in the area, compared to the proposed project, should construction workers relocate to the area.  
41 The impacts of this alternative and those of the proposed project would be substantially the same.

42  
43 All other impacts related to population and housing would be the same as those associated with the  
44 proposed project.



1 **Public Services and Utilities**

2 The Gas-Insulated Substation Alternative would have a negligibly ~~increased~~ ~~reduced~~ potential for  
3 the need for public services due to hazardous materials spills, fire, theft, and vandalism, as well as  
4 lower production of wastewater and storm water as a function of the ~~longer~~ ~~shorter~~ construction  
5 period at the substation site, ~~as discussed previously under Air Quality, and the reduced~~  
6 ~~construction activity and substation footprint compared to the proposed project. Impacts would be~~  
7 ~~substantially the same as the proposed project.~~

8  
9 The smaller disturbance area associated with the Gas-Insulated Substation Alternative would  
10 require less water for dust control during construction than the proposed project. This alternative  
11 would reduce ground disturbance by about ~~11~~ 14 percent, which may also reduce water use for  
12 dust construction at the substation by ~~11~~ 14 percent.

13  
14 All other impacts related to public services and utilities would be the same as for the proposed  
15 project.

16  
17 **Recreation**

18 It is presumed the same maximum number of employees would be need during construction of this  
19 alternative as for the proposed project. The duration of need for workers would, however, be  
20 slightly ~~longer~~ ~~shorter~~ than for the proposed project, resulting in a small potential ~~increase~~  
21 ~~decrease~~ in the time that workers may need to relocate to the area. Thus, any increased use in  
22 recreational facilities due to temporary relocation of construction workers to the area could be  
23 negligibly ~~increased~~ ~~reduced~~ under the Gas-Insulated Substation Alternative compared to the  
24 proposed project. The impacts of this alternative and those of the proposed project would be  
25 substantially the same.

26  
27 All other impacts related to recreation under this alternative would be the same as those associated  
28 with the proposed project.

29  
30 **Transportation and Traffic**

31 Construction of the Gas-Insulated Substation Alternative would result in total ~~increased~~ ~~reduced~~  
32 vehicle trips, though the maximum daily vehicle trips would remain approximately the same as  
33 under the proposed project. ~~The reduced substation size would result in a shorter construction~~  
34 ~~period and less grading resulting in fewer soil import and export trips. The Gas-Insulated Substation~~  
35 ~~Alternative would exclude from the disturbance area much of the Phase 3 area shown in Figure 2-4,~~  
36 ~~which, under the proposed project, was to provide some of the fill required at the substation site.~~  
37 ~~Without this fill available, it is estimated that an additional 3,150 truck trips would be needed~~  
38 ~~during construction, in total, to import soil to the site, but it is assumed that daily construction~~  
39 ~~activities would not change in intensity. Thus, daily vehicle trips would be about the same under~~  
40 ~~this alternative compared to the proposed project. However, the reduced construction period at~~  
41 ~~the substation under the Gas-Insulated Substation Alternative would result in an overall substantial~~  
42 ~~decrease in total traffic and transportation impacts (Impact TT-1 and Impact TT-2). An additional~~  
43 ~~3,150 trips over an additional 4 months of construction during Phase 1 equates to an average of~~  
44 ~~approximately 7 truck trips per day. Applying a passenger car equivalent (PCE) of 2, this equates to~~  
45 ~~14 one-way PCE trips per day, on each day of construction. Given that Phase I would have a~~  
46 ~~maximum of 2,144 PCE daily trips, an increase in trips and exhaust emissions of less than 1 percent~~  
47 ~~would result in a negligible increase in maximum daily trips. The increase in trips associated with~~  
48 ~~the Gas-Insulated Substation Alternative would slightly increase a significant impact of the~~

1 proposed project, but the impact would be mitigated to less than significant with the same  
2 mitigation measures proposed to be implemented for the proposed project.  
3

4 All other impacts related to traffic and transportation under this alternative would be the same as  
5 those associated with the proposed project.  
6

#### 7 **5.4 Environmentally Superior Alternative**

8

9 All three alternatives discussed in Section 5.3, “Comparison of Alternatives,” are considered  
10 environmentally superior to the proposed project. As shown in Table 5.3-3, the One-Transformer-  
11 Bank Substation Alternative is considered the most environmentally superior alternative in seven  
12 ~~nine~~ resource areas, and the Gas Insulated Substation Alternative is considered the most  
13 environmentally superior alternative in two one resource areas. For four three-resource areas, all  
14 none of the three alternatives would be environmentally superior to the proposed project because  
15 they would result in similar impacts to the proposed. For traffic and transportation, all three  
16 alternatives would increase impacts, but only slightly. ~~have about the same level of impacts, and~~  
17 ~~none is more environmentally superior than another; however, all three are environmentally~~  
18 ~~superior to the proposed project.~~  
19

20 Although the Gas Insulated Substation Alternative is environmentally superior for ~~noise and~~  
21 aesthetics, this alternative could result in a substantial greenhouse gas impact that may exceed  
22 SCAQMD significance thresholds. As explained in Section 5.3.2.3, “Gas Insulated Substation  
23 Alternative,” the Gas Insulated Substation Alternative would result in a substantial reduction in  
24 aesthetic impacts due to the different switchrack equipment. ~~Noise impacts would be only~~  
25 ~~negligibly reduced, as a result of a shorter construction period in a small area close to sensitive~~  
26 ~~receptors on Holly Oak Drive.~~ The Gas-Insulated Substation Alternative may result in a significant  
27 impact related to greenhouse gases that would not occur under the proposed project or under the  
28 One-Transformer-Bank Alternative. Recent California greenhouse gas policy indicates that  
29 California has determined the reduction of greenhouse gases to be an important goal for the state.  
30 Executive Order B-30-15, signed by the Governor on April 29, 2015, set an aggressive greenhouse  
31 gas reductions goal—40 percent below 1990 levels by 2030. The 2030 goal ultimately is an interim  
32 benchmark to the 2050 goal of 80 percent below 1990 levels. The Executive Order is only the latest  
33 state greenhouse gas reduction policy of many, including the California Global Warming Solutions  
34 Act of 2006. The Executive Order recognizes several severe, adverse impacts of global warming,  
35 including loss of snowpack, drought, increased wildfires, increased smog, and heat waves (State of  
36 California 2015). Due to the potentially grave impacts of greenhouse gas emissions, as recognized in  
37 the State’s latest aggressive policy action to reduce greenhouse gases, the decrease in long-term  
38 aesthetic ~~and short-term noise~~ impacts do not outweigh the substantial increase in long-term  
39 greenhouse gas emissions increase the Gas-Insulated Substation Alternative would cause compared  
40 to the proposed project and to the other alternatives considered.  
41

42 The One-Transformer-Bank Substation is environmentally superior to all alternatives and to the  
43 proposed project in most resource areas. In particular, it is environmentally superior for  
44 permanent impacts to biological resources, which is given substantial weight due to the  
45 permanence of the impacts and the importance of habitat that would be impacted by the proposed  
46 project. In areas where it is not environmentally superior, the Gas-Insulated Substation is superior.  
47 The Gas-Insulated Substation Alternative’s long-term greenhouse gas impacts make it  
48 environmentally inferior to the One-Transformer-Bank Substation despite its benefits related to  
49 ~~noise and~~ aesthetics. The One-Transformer Bank Substation Alternative is therefore considered

1 environmentally superior to the Gas-Insulated Substation Alternative. The One-Transformer Bank  
2 Substation Alternative is therefore the Environmentally Superior Alternative.  
3

## 4 **5.5 No Project Alternative Comparison**

5

6 This section presents a comparison of the No Project Alternative to the proposed project. The No  
7 Project Alternative is described in Section 3.4.4, “No Project Alternative.” If Southern California  
8 Edison (SCE) could not implement the proposed project, SCE has indicated it would pursue several  
9 other actions to address violations of the North American Electric Reliability Corporation, Western  
10 Electricity Coordinating Council, and California Independent System Operator reliability standards.  
11 Those actions include, in summary:

- 12 • Load shed schemes as part of a remedial action scheme
  - 14 • Generation procurement (617 megawatts (MW)) in the Western Los Angeles Basin
  - 15 • Two alternative transmission projects of 35 to 100 miles of 500-kV transmission line in  
16 Southern California
- 17

18 For most resource sections, it would be speculative to determine the No Project Alternative’s  
19 impacts. An explanation is provided as to why determining the impacts would be speculative. For  
20 air quality, greenhouse gases, and public services and utilities, an analysis of probable impacts of  
21 the proposed project are provided.  
22

### 23 **5.5.1 Aesthetics; Biological Resources; Cultural Resources; Geology, Soils, and Mineral 24 Resources; Hazards and Hazardous Materials; Hydrology and Water Quality; Land Use 25 and Planning; Noise; Population and Housing; Recreation; Traffic and Transportation**

26

27 It would be speculative to determine the No Project Alternative’s impacts to aesthetics; biological  
28 resources; cultural resources; geology, soils, and mineral resources; hazards and hazardous  
29 materials; hydrology and water quality; land use and planning; noise; population and housing;  
30 recreation; and traffic and transportation. The CEQA Guidelines state that “[i]f, after thorough  
31 investigation, a Lead Agency finds that a particular impact is too speculative for evaluation, the  
32 agency should note its conclusion and terminate discussion of the impact” (CEQA Guidelines  
33 § 15145). For these resource areas, determining impacts is too speculative for evaluation:  
34

- 35 • **Aesthetics:** The transmission projects would likely result in aesthetic impacts due to  
36 ground disturbance during construction and presence of transmission towers during  
37 operation. Construction of transmission line results in temporary degradation of visual  
38 quality due to ground disturbance. Transmission towers often cause degradation of visual  
39 quality. The generation procurement may result in aesthetic impacts. The precise location of  
40 these elements is unknown, and it is unknown whether generation procurement would be  
41 from existing facilities or from new facilities that would cause new aesthetic impacts. It  
42 would therefore be speculative to determine the potential aesthetic impacts of the No  
43 Project Alternative in comparison to the proposed projects.
- 44 • **Biological Resources, Cultural Resources; Geology, Soils, and Mineral Resources;  
45 Hydrology and Water Quality:** The transmission projects would likely result in impacts on  
46 cultural resources; geology, soils, and mineral resources; and hydrology and water quality  
47 as a result of ground disturbance during construction. Construction of transmission lines

1 would result in ground disturbance that would increase the potential for discovery of  
2 previously unidentified cultural resources, impacts on habitat, and impacts resulting from  
3 erosion and sedimentation. New generation facilities would result in the same; however, it  
4 is unknown if generation would be procured from existing or new generation facilities. It  
5 would therefore be speculative to determine the potential biological resources; cultural  
6 resources; geology, soils, and mineral resources; and hydrology and water quality impacts  
7 of the No Project Alternative in comparison to the proposed project.

- 8 • **Hazards and Hazardous Materials:** Construction of new transmission projects and new  
9 generation would require the use of hazardous materials and would result in an increased  
10 risk of upset conditions and wildfires. The impact area, number of transmission structures,  
11 and general work areas are not known for the transmission lines or new generation, which  
12 precludes determination of the potential accident, wildfire, and hazardous materials risks. It  
13 is also unknown whether generation would be procured from existing facilities or from  
14 facilities that would need to be constructed. It would therefore be speculative to determine  
15 the potential hazards and hazardous materials impacts of the No Project Alternative in  
16 comparison to the proposed projects.
- 17 • **Land Use and Planning, Recreation:** Transmission projects and new generation projects  
18 could cause conflicts with land use policies and may interrupt use of recreational facilities.  
19 These impacts are dependent on the precise location of transmission projects, which is  
20 unknown. It is also unknown whether generation would be procured from existing facilities  
21 or from facilities that would need to be constructed. It would therefore be speculative to  
22 determine the potential land use and planning and recreation impacts of the No Project  
23 Alternative in comparison to the proposed project.
- 24 • **Noise:** Construction of new transmission projects and new generation would result in noise  
25 impacts. Transmission lines rated at 500 kV often generate audible corona noise, and  
26 generation plants also produce noise during operation. It is unknown where either  
27 transmission project or any new generation project would be located in comparison to  
28 sensitive receptors. Furthermore, generation could be procured from existing generators. It  
29 would therefore be speculative to determine the potential noise impacts of the No Project  
30 Alternative in comparison to the proposed project.
- 31 • **Population and Housing:** Construction of new transmission projects and new generation  
32 projects would require available construction workers. It is not known whether SCE would  
33 utilize local workers or workers who would relocate. It is also not known if generation  
34 would need to be constructed or if all 617 MW could be procured from existing resources. It  
35 would therefore be speculative to determine the potential population and housing impacts  
36 of the No Project Alternative in comparison to the proposed project.
- 37 • **Traffic and Transportation:** Construction of new transmission projects and new  
38 generation projects would require truck and vehicle trips to transport equipment,  
39 materials, and workers. The precise locations of construction and the roads that would be  
40 used to access construction areas are not known. It is also not known of generation would  
41 need to be constructed or if all 617 MW could be procured from existing resources, for  
42 which additional truck and vehicle trips may not be necessary. It would therefore be  
43 speculative to determine the potential traffic and transportation impacts of the No Project  
44 Alternative in comparison to the proposed project.

1 **5.5.2 Air Quality**  
2

3 The No Project Alternative would likely result in higher emissions of criteria pollutants during  
4 operation than the proposed project due to procurement of additional generation within the  
5 Western Los Angeles Basin, assuming the generation is natural-gas-powered. Resources within the  
6 Los Angeles Basin would likely be gas-powered, which would result in long-term emissions from  
7 combustion of natural gas. The proposed project would generate criteria pollutant emissions  
8 similar to current operations and maintenance. Therefore, the proposed project would be  
9 environmentally superior to the No Project Alternative during operations.

10  
11 Construction of new transmission projects and new generation projects would require truck and  
12 vehicle trips to transport equipment, materials, and workers. This would result in emissions of  
13 criteria pollutants. Construction would also result in ground disturbance, which would cause  
14 fugitive dust. The precise locations of construction, which would indicate vehicle trip lengths and  
15 emissions, and amount of ground disturbance, which would indicate that fugitive dust emissions  
16 are not known. It is also not known if generation would need to be constructed or if all 617 MW  
17 could be procured from existing resources, for which additional truck and vehicle trips may not be  
18 necessary. It would therefore be speculative to determine the potential air quality impacts of the No  
19 Project Alternative in comparison to the proposed project.

20  
21 Due to long-term criteria pollutant emissions, the proposed project would be environmentally  
22 superior to the No Project Alternative with regards to air quality impacts.  
23

24 **5.5.3 Greenhouse Gas Emissions**  
25

26 The No Project Alternative would result in higher greenhouse gas emissions during operation than  
27 would the proposed project due to procurement of additional generation within the Western Los  
28 Angeles Basin. Resources within the Los Angeles Basin would likely be gas-powered, which would  
29 result in long-term greenhouse gas emissions from combustion of natural gas. The proposed  
30 projects would generate greenhouse gas emissions similar to current operations and maintenance.  
31 Therefore, the proposed project would be environmentally superior to the No Project Alternative  
32 during operations.  
33

34 Construction of new transmission projects and new generation projects would require truck and  
35 vehicle trips to transport equipment, materials, and workers. This would result in greenhouse gas  
36 emissions. The precise locations of construction, which would indicate that vehicle trip lengths and  
37 emissions, and amount of ground disturbance, which would indicate equipment usage, are not  
38 known. It is also not known of generation would need to be constructed or if all 617 MW could be  
39 procured from existing resources, for which additional truck and vehicle trips may not be  
40 necessary. It would therefore be speculative to determine the potential greenhouse gas impacts  
41 from construction of the No Project Alternative in comparison to the proposed project.  
42

43 Due to long-term greenhouse gas emissions, the proposed project would be environmentally  
44 superior to the No Project Alternative with regards to greenhouse gas impacts.  
45

46 **5.5.4 Public Services and Utilities**  
47

48 The load shed schemes implemented as part of the RAS would, in the case that a contingency (e.g.,  
49 N-1-1, N-2) occurred, result in outages to customers in the area that load shedding is implemented.

1 For example, if load is shed at the Mission Viejo Substation, customers served by the Mission Viejo  
2 Substation would be without power for the duration of the contingency. It is expected that the  
3 contingency would only last for a few hours, meaning the load shed would only last for a few hours  
4 once implemented. This would result in greater utility service impacts than the proposed project.  
5 The proposed project would therefore be environmentally superior to the No Project Alternative.  
6

### 7 **5.5.5 Conclusion**

8  
9 The proposed project would be environmentally superior to the No Project Alternative for the  
10 following impacts:

- 11 • Operational criteria air pollutant emissions
- 12 • Operational greenhouse gas emissions
- 13 • Operational greenhouse gas emissions
- 14 • Electrical service reliability

15  
16 Determining whether the No Project Alternative is superior or inferior to the proposed project in all  
17 other resource areas would be speculative. It is therefore also speculative to conclude whether the  
18 No Project Alternative would be overall environmentally superior to the proposed project or to any  
19 of the considered alternatives.