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CHAPTER 5 – DETAILED DISCUSSION OF SIGNIFICANT IMPACTS

5.0 INTRODUCTION

In accordance with the Proponent's Environmental Assessment (PEA) Checklist issued by the California Public Utilities Commission (CPUC) on November 24, 2008, this section:

- Identifies the potentially significant impacts that would result from the construction, operation, or maintenance of the San Diego Gas & Electric Company (SDG&E) South Bay Substation Relocation Project (Proposed Project)
- Discusses the alternatives that were evaluated in determining the Proposed Project and the justification for the selection of the preferred alternative
- Discusses the Proposed Project's potential to induce growth in the area

5.1 APPLICANT-PROPOSED MEASURES TO MINIMIZE SIGNIFICANT EFFECTS

Based on the findings in Chapter 4 – Environmental Impact Assessment, the Proposed Project is not likely to result in significant impacts to any resource areas after implementation of the applicant-proposed measures (APMs). SDG&E has identified 20 APMs that it plans to implement during construction and/or operation of the Proposed Project to reduce or avoid impacts. Chapter 3 – Project Description provides the APMs that have been proposed as part of the Proposed Project, as well as the justification for each.

5.2 DESCRIPTION OF PROJECT ALTERNATIVES AND IMPACT ANALYSIS

5.2.0 Introduction

Section 15126.6, subdivisions (a) and (f)(2)(A) of the California Environmental Quality Act (CEQA) Guidelines and Assigned Commissioner's Ruling on Application 01-07-004 (dated October 16, 2002) do not require a review of alternatives when a project would not result in significant environmental impacts after mitigation, as is the case with the Proposed Project. However, the CPUC has adopted an "Information and Criteria List" in order to determine whether applications for projects are complete. The list specifies the information required from any applicant for a project subject to the CEQA. As the lead agency, the CPUC requires applicants for a Permit to Construct or a Certificate of Public Convenience and Necessity to describe a reasonable range of alternatives within the PEA.

This section summarizes and compares the environmental advantages and disadvantages of the Proposed Project and the alternatives considered. In accordance with CPUC requirements, SDG&E evaluated a reasonable range of alternatives that have the potential to avoid or substantially lessen significant impacts of the Proposed Project. Under the CEQA, the intent of analyzing project alternatives is to identify ways to mitigate or avoid the significant effects of the Proposed Project on the environment (Public Resources Code Section 21002.1). The discussion of alternatives only needs to focus on the alternatives to the Proposed Project or the locations that

are capable of avoiding or substantially decreasing the significant impacts of the Proposed Project.

This environmental alternatives analysis evaluates the No Project Alternative, five system or facility alternatives to the Proposed Project as a whole, and eight alternative locations for the Bay Boulevard Substation. Each alternative is evaluated for its feasibility and ability to fulfill the Proposed Project objectives, as well as its ability to reduce environmental impacts compared to the Proposed Project. Table 5-1: Alternatives Considered lists each alternative that was considered during the alternatives evaluation process. Figure 5-1: Alternative Substation Sites shows the location of each alternative on an aerial-based map. All of the site alternatives are located in the southwestern portion of San Diego County. System alternatives that were clearly not feasible were rejected early in the evaluation process and are not discussed in detail in this document. Alternatives to the Proposed Project that were evaluated, including the No Project Alternative, are summarized in Section 5.2.3 No Project Alternative. Feasible alternatives that were considered but eliminated because they did not meet the Proposed Project objectives or reliability requirements are discussed briefly in Section 5.2.5 Substation Site Alternatives.

5.2.1 Methodology

The CEQA does not provide specific direction regarding the methodology of alternatives comparison. Resource areas that are generally given more weight in comparing alternatives are those with long-term impacts, such as visual impacts, permanent loss of habitat, or land-use conflicts. Impacts associated with construction (i.e., temporary or short-term) or those that are easy to mitigate to the less-than-significant level are considered to be less important. In order to properly analyze each alternative, SDG&E followed a three-step process. SDG&E began by determining if each alternative is feasible; that is, they evaluated whether the requirements to build the alternative are reasonable, as defined in the CEQA Guidelines. SDG&E then determined which alternatives attain a majority of the Proposed Project objectives. Lastly, SDG&E evaluated the relative environmental impact of each site alternative for select resource areas.

The No Project Alternative and System Alternatives listed in Table 5-1: Alternatives Considered, were analyzed based on their ability to meet the engineering requirements and Proposed Project objectives. Because they did not meet all of the Proposed Project objectives, no further analysis was conducted. The Site Alternatives were analyzed based on their ability to meet the engineering requirements, Proposed Project objectives, and environmental constraints. This analysis resulted in the selection of a new 230/69 kV (kilovolt) substation (Bay Boulevard Substation), which is described in detail in Chapter 3 – Project Description.

Table 5-1: Alternatives Considered

Type of Alternative	Alternative	Evaluated or Eliminated
No Action Alternatives	No Action (No Project) Alternative	Evaluated
System Alternatives	Transmission System Load Management Alternatives	Eliminated
	Energy Conservation Alternative	Eliminated
	Bay Boulevard Substation at 138/69 kV Alternative	Evaluated
	Bay Boulevard Substation at 230/69 kV Alternative (Preferred)	Evaluated
	Expansion of South Bay Substation by Expanding Substation Boundary Alternative	Evaluated
Substation Site Alternatives	Tank Farm Site Alternative	Evaluated
	Existing South Bay Substation Site Alternative	Evaluated
	Power Plant Site Alternative	Evaluated
	Liquefied Natural Gas Site Alternative (Preferred)	Evaluated
	South Bay Boulevard Site Alternative	Evaluated
	Toy Storage Site Alternative	Evaluated
	Cima NV Site Alternative	Evaluated
	Broadway and Palomar Site Alternative	Evaluated

5.2.2 Proposed Project Objectives

The Proposed Project is being proposed to meet objectives for utilizing the southern transmission system for the South Bay area. Specifically, the Proposed Project has the following four primary objectives:

- Objective 1: Replace aging and obsolete substation equipment.
- Objective 2: Design a flexible transmission system that would accommodate regional energy needs subsequent to the retirement of the South Bay Power Plant (SBPP).
- Objective 3: Facilitate the City of Chula Vista's Bayfront redevelopment goals by relocating the South Bay Substation and furthering the goals of the SDG&E-City of Chula Vista Memorandum of Understanding (MOU).
- Objective 4: Provide for future transmission and distribution load growth for the South Bay region.

Each of these Proposed Project objectives is more thoroughly described in Chapter 2 – Project Purpose and Need.

5.2.3 No Project Alternative

The CEQA requires an evaluation of the No Project Alternative so that decision makers can compare the impacts of approving the Proposed Project with the impacts of not approving the Proposed Project (CEQA Guidelines, Section 15126.6(e)). Under the No Project Alternative, the Bay Boulevard Substation would not be constructed, the 69 kV facilities would not be relocated, and the existing South Bay Substation would continue to operate in its existing location, but without the generation of the SBPP.

The South Bay Substation is a transmission substation that provides voltage transition between the 138 kV and 69 kV transmission lines that traverse the South Bay area. These 69 kV transmission lines currently serve the surrounding area, including the communities of Chula Vista, National City, Imperial Beach, and San Ysidro.

The approximate customer base of the distribution substations served by the South Bay Substation is over 93,700 customers, including the cities of Chula Vista, National City, Imperial Beach, and portions of San Diego. Customers also include the industrial and commercial users along the San Diego Bay, and the redevelopment area of Chula Vista.

Due to the increase in the South Bay load and the lack of bulk power transfer capability in the existing 138 kV system, portions of the 69 kV network would need to be reconductored to support the inadequate 138 kV system that feeds the South Bay area once the SBPP is retired. Some 69 kV transmission lines would need to be rated at levels that exceed the ratings on many of the 138 kV lines in the SDG&E system, which is undesirable for the 69 kV system. System operability would then become an issue due to the large amounts of power that would need to be rerouted in the event of a scheduled or forced outage. As loads on 69 kV transmission lines increase, the probability of overloads during outages increases, resulting in system conditions

Figure 5-1: Alternative Substation Sites Map

South Bay Substation Relocation Project

Alternative Substation Site
Substation Wall
12.42-Acre Parcel Boundary
SDG&E Easement

SDGE
A Sempra Energy utility
INSIGNIA ENVIRONMENTAL

N
W E
S

1:12,000

0 250 500 1,000 1,500 2,000 2,500 Feet

Figure 5-1 Alternatives.mxd

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which may require load shedding to maintain system integrity. As a result, the No Project Alternative results in leaving an aging and obsolete substation in service, thereby increasing the likelihood of an equipment failure that could result in load loss in the South Bay region.

The No Project Alternative would not meet any of the Proposed Project's four objectives. The No Project Alternative would not meet Proposed Project Objective 1 because aging and obsolete equipment would not be replaced. The No Project Alternative would not provide the opportunity to optimally utilize the 230 kV system in the South Bay region and allow for a future distribution substation to serve the region; thus, it would not meet Proposed Project Objectives 2 and 4. In addition, the No Project Alternative would not meet Proposed Project Objective 3 because SDG&E would not facilitate redevelopment in the area nor meet the terms of the MOU, which specify that the substation be relocated.

5.2.4 System Alternatives

Two potential system alternatives were evaluated; however, neither met the Proposed Project objectives, as described further in the following subsections.

Transmission System Load Management Alternatives

SDG&E considered various transmission system load management options. Load management programs reduce peak electric demand or have the primary effect of shifting electric demand from peak to non-peak time periods. SDG&E has already incorporated demand response programs as a result of its ongoing generation procurement. An example of these efforts is contained in the CPUC's March 27, 2001 Decision on the Implementation of Public Utilities Code Section 399.15(b), Paragraphs 4-7; Load Control and Distributed Generation Initiatives. In this Decision, the CPUC authorized SDG&E to administer a pilot program designed to test the viability of a new approach to residential load control and demand-responsiveness through the use of Internet technology and thermostats that affect central air conditioning use. More recently, the CPUC approved dynamic pricing options for large commercial/industrial customers. These rate options offer customers a commodity discount in exchange for reducing load during critical periods.

This alternative also does not address Proposed Project Objectives 1, 2, or 3 because it would not replace aging and obsolete equipment, would not be able to accommodate generation retirement and future generation additions, nor would it further the redevelopment of the area and the goals of the SDG&E-City of Chula Vista MOU. This alternative would also not meet Proposed Project Objective 4 because it would not provide capacity for future loads since these load management programs have already been accounted for in terms of procurement, loading, and transmission planning. As a result, this alternative was eliminated from further consideration.

Energy Conservation Alternative

Under the direction of the CPUC, SDG&E offers a number of energy conservation programs for customers, including financial incentives for installing specific energy-efficient appliances or taking other measures to conserve energy. SDG&E also provides programs, such as online energy profiling and in-home energy audits, to make customers more aware of their energy usage and of ways to conserve, as well as a variety of free brochures on improving energy efficiency.

These programs play an important role in energy savings and have successfully reduced energy use in the San Diego area. SDG&E energy conservation goals are already factored into the long-term resource plan; therefore, in theory, no additional cost-effective energy-efficient options are available. Despite these programs and their ability to avoid or reduce environmental impacts associated with the Proposed Project, this alternative would not meet any of the Proposed Project objectives because it would not provide for a relocated substation, thus resulting in the continued use of aging equipment and inability to design a flexible transmission system to address future load growth. It also would not further the goals of redevelopment in the area. Therefore, this alternative was eliminated from further consideration.

Evaluated System Alternatives

Three potential system alternatives were evaluated; however, only one met all of the Proposed Project objectives, as described further in the following subsections.

Build a New 138/69 kV Bay Boulevard Substation

In this alternative scenario, a new substation with the same voltage as the existing South Bay Substation would be constructed. This alternative meets Proposed Project Objective 1 because it includes replacing aging equipment, thereby reducing the risk of equipment failures. This alternative also meets Proposed Project Objective 3 because constructing the Bay Boulevard Substation would facilitate redevelopment in the area by removing the existing South Bay Substation, and because it would further the goals of the SDG&E-City of Chula Vista MOU. However, this alternative does not meet Proposed Project Objective 2 because there would be no opportunity to expand the 230 kV system in the South Bay region. In addition, this alternative does not fully satisfy Proposed Project Objective 4 because although the installation of new transformers would provide additional capacity over the existing transformer, it would not have the capacity of a 230 kV system. Due to the fact it does not fully meet two of the four objectives, this alternative was eliminated from further consideration.

Build a New 230/69 kV Bay Boulevard Substation

This alternative involves constructing the proposed Bay Boulevard Substation at 230/69 kV at a location just south of the existing substation. This alternative meets Objectives 1 through 4 because the existing South Bay Substation would be replaced with a new substation that is able to accommodate future demands. This alternative meets Proposed Project Objective 1 because the new Bay Boulevard Substation would replace the aging and obsolete equipment currently used at the existing South Bay Substation. This alternative meets Proposed Project Objective 2 because the 230/69 kV substation would be more reliable and flexible than the existing South Bay Substation. The proposed relocation of the South Bay Substation is consistent with the City of Chula Vista's Bayfront redevelopment goals, thus meeting Proposed Project Objective 3. Lastly, constructing the new Bay Boulevard Substation at 230/69 kV would provide a needed power source in the absence of the SBPP in a more reliable manner than the existing substation, and would serve as a flexible platform from which SDG&E could construct and connect new transmission facilities in the future, thereby meeting Proposed Project Objective 4. As a result, this alternative fully meets all of the Proposed Project Objectives.

Expand the Existing South Bay Substation

This alternative would expand the existing South Bay Substation at the same voltage level that is currently in service (138/69 kV). The existing South Bay Substation would be expanded outside of the existing substation fence, adjacent to the existing 69 kV structures. This solution would provide some additional 69 kV capacity, although it does not address the need to upgrade the bulk power source feeding the substation after the retirement of the SBPP. Without this generation source, expansion of the South Bay 69 kV bus would not increase reliability to the South Bay 69 kV system, thus not meeting Proposed Project Objective 4 to the extent that a 230 kV system would. Expansion of the South Bay Substation would also not remedy the concerns regarding the seismic design of the existing South Bay structures, which are not to current standards; therefore, this alternative would not meet Proposed Project Objective 1.

The bulk power sources for the South Bay Substation after the SBPP retires are the Mission and Miguel 138 kV substations. There are distribution substations between the South Bay Substation and both Miguel and Mission substations, which causes operational concerns, as discussed further in Chapter 2 – Project Purpose and Need. If maintenance occurs on any 138 kV element in the distribution substations, one source to South Bay Substation would be out of service, resulting in lower reliability of the system, and therefore not meeting Proposed Project Objective 2. This is not true for a 230 kV substation due to the redundant configuration of bulk power substations. Additionally, if the South Bay Substation is expanded, the goals of redeveloping the area would not be advanced; thus, Proposed Project Objective 3 would not be met. Due to the fact that this alternative would not meet three of the four alternatives, it was eliminated from further consideration.

5.2.5 Substation Site Alternatives

A total of eight substation sites were initially considered for construction of the Bay Boulevard Substation. These potential substation sites are depicted in Figure 5-1: Alternative Substation Sites. None were eliminated during the preliminary screening effort, and as such, all eight sites were evaluated based on the following differentiating criteria:

- Engineering Factors
  - Parcel size (minimum eight acres) and shape
  - Proximity to existing transmission lines
  - Use of existing ROW
- Ability to meet the Proposed Project Objectives
- Land Rights
  - Ability to secure the parcel in accordance with schedule constraints
  - Cost
- Environmental Constraints
  - Recorded occurrences of sensitive species on site
  - Potential visibility from residences and recreational areas, based on proximity
  - Hydrological features on site
  - Potential for land use conflicts

From these eight alternatives, a preferred substation location was determined based on these criteria.

Tank Farm Site

The Tank Farm Site Alternative is an approximately 17-acre vacant and highly disturbed site, located approximately 250 feet north of the existing South Bay Substation. The site is located 200 feet west of Bay Boulevard and the Pima Medical Institute.

The site is large enough to support the proposed substation and is currently zoned Industrial. The site is adjacent to the west side of the SDG&E transmission line right-of-way (ROW), thereby allowing for feasible access to the SDG&E transmission corridor. This site would meet Proposed Project Objectives 1 and 3 because the aging equipment used at the existing South Bay Substation would be replaced, and building the substation at a new site would facilitate the City of Chula Vista's Bayfront redevelopment goals and further the SDG&E-City of Chula Vista MOU. It would also meet Proposed Project Objectives 2 and 4 because the site could accommodate facilities to support future load and is located in close proximity to existing SDG&E line, making it a good candidate for design flexibility.

SDG&E's ability to secure the Tank Farm Site according to the Proposed Project schedule is unknown. Further, the cost associated with purchasing it would greatly exceed that of the Proposed Project no-cost land exchange.

Marina View Park is adjacent to the north side of the site; therefore, portions of the site would be highly visible to the public. However, there are no residential uses nearby. According to the California Natural Diversity Database (CNDDB), one state listed species—Belding's savannah sparrow (*Passerculus sandwichensis belidingi*)—has known occurrences within the site. According to National Wetland Inventory (NWI) wetland maps, a small portion of a wetland is contained on the west side of the site. The site is zoned Industrial and is highly disturbed, so its use would not result in a land use conflict.

Due to the proximity to the uncertainty of parcel acquisition; high cost to obtain the property (compared to the no-cost land exchange); and potential environmental constraints, including the park, potential for sensitive species, and the wetland on site, the Tank Farm Site Alternative was not selected as the preferred alternative.

Existing South Bay Substation Site

The Existing South Bay Substation Site Alternative assumes that the existing South Bay Substation would be demolished and a new substation would be constructed in its place. The approximately eight-acre South Bay Substation site is adjacent to the north side of the existing SBPP and is directly adjacent to the SDG&E transmission line ROW, thereby allowing for feasible access to the SDG&E transmission corridor. The site is large enough to support the proposed substation and is currently zoned Industrial.

This site would meet Proposed Project Objective 1 because the new substation would replace the aging and obsolete equipment that is currently used at the South Bay Substation. As this alternative would not result in the relocation of the existing South Bay Substation once the power

plant is retired, it would not meet Proposed Project Objective 3. It would meet Objectives 2 and 4 because it is large enough to accommodate additional facilities and is in close proximity to existing lines, which would support design flexibility or future load growth.

Because SDG&E currently has rights at the existing facility, there would be no issues with acquisition feasibility, schedule, or cost.

Constructing a new substation on this property may result in future visual impacts, as lands to the north of the existing South Bay Substation site are planned to support residential uses and accommodate recreational areas. According to the CNDDB, no sensitive biological resources occur within the site. Furthermore, no residential uses are adjacent to the site and no noteworthy NWI wetland features exist within or adjacent to the site. While it is an existing industrial use, the City of Chula Vista and the Port District are planning to develop the area, which could result in a potential land use conflict.

Due to the fact that it would not meet all of the Proposed Project objectives and may conflict with future development, the Existing South Bay Substation Site Alternative was not selected as the preferred alternative.

Power Plant Site

The approximately 31-acre Power Plant Site Alternative is located south of the existing SBPP and is adjacent to the west side of the transmission line ROW, thereby allowing for feasible access to the SDG&E transmission corridor. The site is large enough to accommodate the requirements of the proposed Bay Boulevard Substation.

The new substation would replace the aging equipment at the South Bay Substation, meeting Proposed Project Objective 1. However, building the Bay Boulevard Substation at this site would not help to facilitate the City of Chula Vista's Bayfront redevelopment goals nor further the SDG&E-City of Chula Vista MOU. As a result, it would not meet Proposed Project Objective 3. It would, on the other hand, meet Objectives 2 and 4 due to the size of the site and its proximity to existing lines, allowing for the design of a flexible system that could support future load growth. However, the site is further from transmission lines than other alternative sites, making it less desirable.

While SDG&E could potentially secure the Power Plant Site, the cost associated with purchasing it would greatly exceed that of the Proposed Project no-cost land exchange and would not likely meet the Proposed Project schedule due to the fact that the power plant is still operating and would take time to decommission and demolish.

According to the CNDDB, three listed species are known to occur within the site—Belding's savannah sparrow, western snowy plover (*Charadrius alexandrinus nivosus*), and light-footed clapper rail (*Rallus longirostris levipes*). The western snowy plover is federally-listed, the Belding's savannah sparrow is state-listed, and light-footed clapper rail (*Rallus longirostris levipes*) is state- and federally listed. Although these species have the potential to be present on site, they are not anticipated due to the existing activities present. Furthermore, no residential uses or recreational areas are adjacent to the site. As depicted on NWI wetland maps, a small

portion of a wetland is located on the west side of the site. While the site is an existing industrial use, it is also slated for development, which could result in a land use conflict.

Because the Power Plant Site Alternative would not meet all of the objectives, has the potential for impacts to sensitive species and a wetland, may result in a potential land use conflict, and may not meet the Proposed Project schedule, it was not selected as the preferred alternative.

Liquefied Natural Gas Site (Preferred)

The Liquefied Natural Gas (LNG) Site Alternative is located on an approximately 12.4-acre parcel, approximately 0.25 mile south of the existing SBPP site, on the southern half of a former LNG site. The site is generally situated between the San Diego Bay to the west and Bay Boulevard to the east. The site is located in a generally industrial area, which has been used in the past for utility infrastructure (i.e., a LNG facility). It is adjacent to the west side of the transmission line ROW, thereby allowing for feasible access to the SDG&E transmission corridor. In addition, all necessary transmission line extensions can be accommodated within SDG&E's existing 300-foot-wide ROW. The site is large enough to accommodate the requirements of the new proposed Bay Boulevard Substation.

This site would meet Proposed Project Objective 1 because it would involve the construction of a new substation, which would replace aging and obsolete equipment. The proposed site is large enough for the construction of a new substation with 230 kV, 69 kV, and 12 kV busses. The proposed site meets Proposed Project Objective 2 by providing access to 230 kV system resources and providing three bays for future 230 kV lines. The proposed site meets Proposed Project Objective 4 because it provides for future load growth in the South Bay region due to the fact that the new substation would accommodate six future 69 kV lines and is sized for 16 future 12 kV circuits. Construction of the proposed Bay Boulevard Substation would result in the decommissioning of the existing South Bay Substation, which would facilitate redevelopment in the area of the existing South Bay Substation by removing it, and would meet Proposed Project Objective 3. Lastly, this site meets Proposed Project Objective 4 because constructing the new Bay Boulevard Substation would function as an outlet for generation from Otay Mesa Energy Center (OMEC) via a 230 kV transmission line. This configuration would result in power flowing from the OMEC to the proposed Bay Boulevard Substation through the 230/69 kV transformers and out to load-serving substations. This flow pattern would help to minimize losses by delivering power to the load in an efficient manner.

The LNG Site would be provided to SDG&E for construction of the substation through a no-cost land exchange, which would be economical and meet the Proposed Project schedule.

Two federally listed species—western snowy plover and light-footed clapper rail—have known occurrences within the site, and one state-listed species—light-footed clapper rail—has known occurrences on the site. The site is located in an area surrounded by other industrial uses; no residential development or recreational areas are adjacent to the site. According to NWI wetland maps, no NWI wetlands are located on the site; however, during field surveys, several wetlands were identified on site and would be affected by the use of this site. These wetlands are remnants of the previous LNG facility, are degraded, and provide little biological value, as described in Section 4.4 Biological Resources. SDG&E would mitigate for impacts to these

wetlands on site by creating a wetland that has higher function and value than the existing wetlands. Because this site historically has been used for industrial purposes and is vacant, it would not result in any potential for land use conflicts. More information regarding land use and potential policy conflicts is provided in Section 4.9 Land Use and Planning.

Because the LNG Site Alternative meets all of the objectives, is located in an industrial area that had a previous similar use, is not expected to have visual impacts, and would meet the Proposed Project land right criteria, it was selected as the preferred alternative.

South Bay Boulevard Site

The approximately 15-acre South Bay Boulevard Site Alternative is located approximately 0.8 mile south of the existing South Bay Substation, adjacent to Bay Boulevard and Western Salt Works to the east. Interstate 5 (I-5) is located west of the site, and commercial and residential uses are located to the north and south of the site.

This alternative site meets Proposed Project Objectives 1 and 3 because the new substation would replace aging equipment used at the South Bay Substation and would facilitate redevelopment in the area of the existing South Bay Substation by removing it. The proposed site meets Proposed Project Objective 2 by providing access to 230 kV system resources and providing three bays for future 230 kV lines. The proposed site meets Proposed Project Objective 4 as it provides for future load growth in the South Bay region because the new substation would accommodate six future 69 kV lines and is sized for 16 future 12 kV circuits.

The proposed site is large enough for the construction of a new substation with 230 kV, 69 kV, and 12 kV busses. However, because the site currently contains residential, commercial, and industrial uses, multiple residential and industrial uses would need to be relocated or possibly condemned in order to construct the substation, resulting in a conflict with existing land uses. In addition, this site is located approximately 1,500 feet from the SDG&E transmission line ROW. Access to the ROW would need to be provided through Bay Boulevard and Palomar Street. Access to the transmission lines would require an initial extension of two 230 kV and five 69 kV lines, and ultimately five 230 kV and twelve 69 kV lines, through these city streets (outside of existing SDG&E ROW), which may be constrained by existing underground utilities. This limited routing represents a potential site constraint and could prove challenging and costly to implement.

SDG&E's ability to secure the South Bay Boulevard Site according to the Proposed Project schedule is unknown. Further, the cost associated with purchasing it would greatly exceed that of the Proposed Project no-cost land exchange.

No sensitive species occur within the site, according to the CNDDB. Furthermore, no noteworthy hydrological features exist within or adjacent to the site according to NWI wetland maps.

Because this site has significant land use conflicts, would be highly visible, would pose engineering challenges, and may not meet the Proposed Project's land rights criteria, it was not selected as the preferred site.

Toy Storage Site

The approximately seven-acre Toy Storage Site Alternative is located approximately 0.6 mile southeast of the existing South Bay Substation. The site is surrounded by Industrial Boulevard on the east, I-5 on the west, a residential development to the north, and a motel and residential development to the south. This site is currently owned by SDG&E and is utilized as a transmission corridor between the Miguel and South Bay Substations. The site has also been leased by a private business and used to store recreational vehicles, boats, and automobiles. Therefore, this site meets criteria of being accessible, and in close proximity to existing SDG&E facilities.

The site has a thin linear configuration (approximately 250 feet by 1,250 feet), thereby restricting the potential layout of a substation. In addition, the site lacks the adequate area needed to construct the substation, thus not meeting the criteria for the minimum parcel size. Selection of this alternative site would require the rerouting of two 138 kV transmission lines around the site, or through existing streets (possibly underground), thereby representing a site constraint. Selection of this site also introduces reliability and maintenance issues related to limited future capacity within the ROW and limited transmission get-aways. This alternative site meets Proposed Project Objectives 1 and 3 because the new substation would replace aging equipment and would facilitate redevelopment in the area of the existing South Bay Substation by removing it. It would not meet Objective 2 due to the routing constraints. It would not meet Proposed Project Objective 4 due to its size and shape, which would restrict future installation of necessary equipment.

Due to the existing lease on the site, SDG&E's ability to secure the Toy Storage Site is unknown. Further, the cost associated with purchasing it would greatly exceed that of the Proposed Project no-cost land exchange.

Because the site is adjacent to residential uses, the new substation would be highly visible to the public. According to the CNDDB search results, no sensitive species occur within the site. Furthermore, no noteworthy hydrological features exist within or adjacent to the site according to the NWI wetland maps. The site is currently a utility corridor, so its use would not present any land use conflicts.

Because the Toy Storage Site Alternative would not meet all of the Proposed Project objectives, would not meet the size and configuration requirements for the substation, and would not meet the land rights criteria, it was not selected as the preferred alternative.

Cima NV Site

The approximately five-acre Cima NV Site Alternative is located approximately 0.85 mile southeast of the existing South Bay Substation. Palomar Street is located to the north, Industrial Boulevard is located to the east, a residential development is located to the south, and East Frontage Road is located to the west. This site is vegetated and currently vacant. It is in close proximity to the SDG&E ROW; however, the Cima NV Site Alternative does not provide the adequate land area needed to construct the substation due to its linear configuration (approximately 270 feet by 810 feet), and would not meet the criteria for minimum parcel size.

This alternative meets Proposed Project Objectives 1 and 3 because the new substation would replace aging equipment used at the South Bay Substation and would also facilitate redevelopment in the area of the existing South Bay Substation by removing it. However, Proposed Project Objectives 2 and 4 would not be met because of its limited size, which would restrict the ability to install the necessary equipment for a flexible design that would also support future load growth.

SDG&E's ability to secure the Cima NV Site is unknown. Further, the cost associated with purchasing it would greatly exceed that of the Proposed Project no-cost land exchange.

Because the site is adjacent to residential uses, the new substation would be highly visible to the public. According to the CNDDB search results, no sensitive species occur within the site. Furthermore, no noteworthy hydrological features exist within or adjacent to the site according to the NWI wetland maps.

Due to the size and shape limitation, as well as the land rights issues, this alternative was not selected as the preferred alternative.

Broadway and Palomar Site

The approximately nine-acre Broadway and Palomar Site Alternative is located approximately 1.2 miles southeast of the existing South Bay Substation. The site is vegetated and is surrounded by a commercial shopping center to the north, a residential apartment complex and trailer park to the south, Broadway to the east, and Industrial Boulevard to the west. This site is currently owned by SDG&E, and is utilized as a transmission corridor between the Miguel and South Bay substations. Therefore, this site meets the criteria of being within close proximity to the SDG&E ROW, and allows for easy access to the SDG&E transmission corridor. However, the site has a linear configuration (approximately 225 feet by 1,800 feet), thereby restricting the potential layout of the substation. The site also lacks the adequate land area needed to construct the substation and would therefore, not meet the land use criteria. Selection of this alternative site would require the rerouting of two 138 kV transmission lines around the site, or through existing streets (possibly underground), thereby representing an additional site constraint. Selection of this site also introduces reliability and maintenance issues related to limited future capacity within the ROW.

This alternative site meets Proposed Project Objectives 1 and 3 because the new substation would replace aging equipment used at the South Bay Substation and would facilitate redevelopment in the area of the existing South Bay Substation. Proposed Project Objectives 2 and 4 would not be met because of the routing and reliability and maintenance constraints.

SDG&E's ability to secure the Broadway and Palomar Site is unknown. Further, the cost associated with purchasing it would greatly exceed that of the Proposed Project no-cost land exchange.

Because the site is adjacent to residential uses, the new substation would be highly visible to the public. According to the CNDDB search results, no sensitive species occur within the site. Furthermore, no noteworthy hydrological features exist within or adjacent to the site according to

the NWI wetland maps. The site is currently in use as a utility corridor, so its use would not present any land use conflicts.

The Broadway and Palomar Site Alternative was not selected as the preferred alternative because of its limited size and shape, as well as engineering constraints associated with transmission line routing to the site.

5.2.6 Conclusion

As described previously, a number of alternative system development approaches and site locations for the Proposed Project were evaluated against the Proposed Project objectives to provide continued future service to the South Bay area. The No Project Alternative, Transmission System Load Management Alternative, Energy Conservation Alternative, Bay Boulevard Substation 138/69 kV Alternative, and Expansion of the Existing South Bay Substation Alternative were evaluated and rejected based upon their inability to meet Proposed Project objectives and engineering design requirements.

With regard to the alternative sites that were evaluated, Table 5-2: Alternative Site Comparison Summary identifies the relative differences between the sites based on the identified criteria. Many of these sites do not meet the minimum land area and shape requirement criteria or would require the extension of transmission lines outside of the existing ROW, resulting in increased land requirements or greater construction impacts than would result from the Proposed Project. SDG&E would not be able to acquire many of the sites according to the Project schedule or for the no cost of the land exchange. Many of the sites would also have environmental and land use conflicts that exceed that of the Proposed Project. Thus, the LNG Site was selected as the preferred substation site. Through this evaluation process, the proposed 230/69 kV Bay Boulevard Substation Alternative was identified as the most feasible alternative that: (a) best meets all of the Proposed Project objectives, (b) is consistent with engineering design requirements, and (c) minimizes environmental impacts.

5.3 GROWTH-INDUCING IMPACTS

5.3.0 Growth-Inducing Impacts

The CEQA requires a lead agency to review and discuss ways in which a project could induce growth. The CEQA Guidelines (Section 15126.2d) considers a project to be growth-inducing if it fosters economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding area. New employees hired for proposed commercial and industrial development projects and population growth resulting from residential development projects represent direct forms of growth. Other examples of growth-inducing projects are the expansion of urban services into previously undeveloped areas or the removal of major obstacles to growth, such as transportation corridors and potable water supply.

The growth-inducing potential of the Proposed Project could be considered significant if it were to stimulate human population growth or a population concentration in Chula Vista, National City, Imperial Beach, or other surrounding communities, above what is assumed in local and regional land use plans, or in projections made by regional planning authorities. Significant

Table 5-2: Alternative Site Comparison Summary

		Substation Site Alternatives							
		Tank Farm	**Existing South Bay Substation**	**Power Plant**	**LNG Facility**	**South Bay Boulevard**	**Toy Storage**	**Cima NV**	**Broadway and Palomar**
Engineering Requirements	Approximate Proximity to ROW (feet)	50	Within ROW	50	100	1,500	Within ROW	600	Within ROW
	Size (acres)	17	8	31	27	15	7	5	9
Number of Project Objectives Met		4	3	3	4	4	2	2	2
Environmental Requirements	Residences within Proximity	0	0	0	0	Many	Many	Many	Many
	CNDDB Occurrences	1	0	3	2	0	0	0	0
	Wetlands On Site[1]	1 (small)	0	1 small	6[2]	0	0	0	0

[1] NWI data was used to identify any potential wetlands for the substation site alternatives; however, field surveys were conducted for the LNG Site alternative.
[2] Field surveys identified 10 wetlands at the LNG Site, four of which are anticipated to be exempt from wetland regulations due to the fact that they were developed in an upland area to protect other Waters of the U.S. and Waters of the State. More information on these wetlands is provided in Section 4.4 Biological Resources.

growth impacts could also occur if the Proposed Project were to provide infrastructure or service capacity to accommodate growth levels beyond those permitted by local or regional plans and policies. Because the Proposed Project would not increase housing, bring in new services, or improve the existing infrastructure system (with the exception of making the existing electric service more reliable and adding additional capacity to accommodate planned growth), it would not stimulate population growth or result in a new concentration of residents, businesses, or industries.

5.3.1 Growth Caused by Direct and Indirect Employment

The construction and operation of the Proposed Project itself would not affect employment patterns in the area. SDG&E would employ approximately 195 workers throughout the 18-month-long construction period. The majority of construction workers is anticipated to come from San Diego County and would not require lodging. Contractors from outside of San Diego County may be mobilized to the job site for all or part of the construction phase of the Proposed Project and may stay at existing local hotels. An abundance of hotels and other lodging facilities are within close proximity to the Proposed Project area and can be utilized by the out-of-town personnel.

Operation and maintenance of the Proposed Project would be performed by current SDG&E employees and would, therefore, not create new jobs. Because the Proposed Project would not result in an increase in employment during the operation and maintenance phase, the Proposed Project would not increase the demand for new housing.

5.3.2 Growth Related to the Provision of Additional Electric Power

Regional Background

The population of San Diego County has increased every year since 1944. As a result, growth is part of the past, present, and expected future of the region. The San Diego Association of Governments (SANDAG) is the regional planning entity for the San Diego region and is composed of representatives from 18 cities and the county government. The SANDAG serves as the forum for regional decision-making. The SANDAG makes strategic plans, obtains and allocates resources, and provides information on a broad range of topics pertinent to the region's quality of life.

The cities and county have designated the SANDAG as the regional planning board, pursuant to a voter-approved proposition. The cities and county provide the SANDAG with information about their general plans, local growth patterns, and land use regulations. In return, the SANDAG generates regional management plans and population forecasts. As members of the SANDAG, the cities and county review and approve all plans and forecasts prepared by the SANDAG. The cities and county use the SANDAG's findings to develop and shape their respective general plans and land use regulations. The county and each city are required to adopt a general plan, which must be updated on a regular basis. All general plans and subsequent amendments are subject to CEQA review.

The SANDAG prepared a Regional Comprehensive Plan (RCP) in 2004 to provide policy guidance on accommodating the growth projected by the SANDAG. A key element of the RCP

is the Integrated Regional Infrastructure Strategy (IRIS), which outlines guidance for planning the region's infrastructure. The goal of the IRIS is to ensure internal consistency with respect to long-term regional infrastructure planning to meet the needs of the growth projected by the SANDAG. The IRIS addresses the energy supply and delivery system as key infrastructure elements. As the primary utility that provides electric service to approximately 3.4 million customers in its service area, which includes all of San Diego County and the southern part of Orange County, SDG&E participates in and supports this aspect of the planning process. The SANDAG has been preparing long-range forecasts of population, housing, and employment since the 1970s. SANDAG's forecasts represent the changes anticipated for the region based on the best available information. The forecast is produced by using established computer models that evaluate land use, demographics, regional and local economics, and transportation patterns. The SANDAG forecasts utilize a complex set of assumptions, input data, computations, and model interactions.

The latest Regional Growth Forecast (RGF) was developed for 2030 and provides an update of expected growth from the previous model that was developed for 2020. The 2030 RGF is based on data from the 2000 census plus updated information for all model inputs. Like the 2020 RGF, the 2030 RGF predicts that local population will grow at an average rate of 32,000 people per year between 2005 and 2030. In addition, San Diego County employment and income will grow steadily throughout the next 20 years and beyond.

The SANDAG does not use energy as a driver of growth; however, its regional growth model recognizes the investment in energy infrastructure as necessary to support the implementation of the RCP. SDG&E coordinates with the SANDAG to address this component of its regional planning process. Only local government entities with jurisdiction over land use approvals can either directly cause or prevent growth. How and where development occurs within SDG&E's service area is dictated by the land use agencies with this authority.

Proposed Project and Growth

The objectives of the Proposed Project are to replace aging and obsolete equipment, design a flexible transmission system, meet long-term land use goals, meet the terms of the Chula Vista MOU, and provide for future transmission and distribution load growth for the South Bay region. The Proposed Project would help to serve the 69 kV load in the South Bay region and would increase flexibility and reliability to the transmission system by replacing the aging South Bay Substation. It would also provide a needed power source in the absence of the SBPP in a more reliable manner than the existing substation, and would serve as a flexible platform from which SDG&E can construct and connect new transmission facilities in the future. Furthermore, the Proposed Project would not create a new service or source of power that would indirectly allow for an increase in population or housing as a result, as it would not extend infrastructure into previously un-served areas.

The Proposed Project would accommodate existing and planned power demands in SDG&E's service territory, as well as those based on state- and locally adopted plans and projections. SDG&E responds to projected development and forecasts, rather than inducing growth by extending infrastructure for future unplanned development. Therefore, the Proposed Project would not induce population growth in the area.

5.4 REFERENCES

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