3 ALTERNATIVES

3.1 INTRODUCTION

The purpose of the alternatives analysis, pursuant to CEQA, is to identify options that would feasibly attain project objectives while reducing the significant environmental impacts resulting from the proposed project.

This section is organized as follows:

1. Section 3.2 provides an overview of the alternatives development
2. Section 3.3 describes the methodology used for the alternatives screening process
3. Section 3.4 describes each alternative that has been retained for full EIR analysis
4. Section 3.5 describes the No Project Alternative, which has been retained for full EIR analysis

Section 6: Comparison of Alternatives of this Draft EIR provides a comparison of alternatives based on the environmental analysis of each alternative. The environmentally superior alternative is also identified in Section 6.

3.2 ALTERNATIVES DEVELOPMENT PROCESS

The Alternatives Screening Report (Appendix E) documents the alternatives development and screening analysis conducted to determine the range of alternatives for consideration in the EIR. It documents the criteria used to evaluate and select alternatives for further analysis, including their feasibility, the extent to which they would meet most of the basic objectives for the proposed project, and their potential to avoid or substantially lessen any of the significant effects of the proposed project. The Alternatives Screening Report provides a complete description of each alternative considered during screening, and discusses why each alternative was either eliminated from further consideration or retained for further consideration in this EIR. The alternatives screening process culminated in the identification and screening of 18 potential alternatives. Three alternatives were retained for analysis in this EIR, and 15 alternatives were eliminated from further analysis.

The alternatives development process included:

- Alternatives proposed by SDG&E in their PEA
- Alternatives suggested by the public during scoping
- Other feasible alternatives capable of meeting the project objectives as developed by the CPUC CEQA Team
- No Project Alternative

3.2.1 CEQA Requirements

CEQA Guidelines (Section 15126.6) emphasize the selection of a reasonable range of technically feasible alternatives that meet most of the basic project objectives, and an adequate assessment of these alternatives to allow decision makers to make a comparative analysis of potential environmental effects (refer to Section 6: Comparison of Alternatives).

CEQA Guidelines (Section 15126.6 (a)) state that:

> An EIR shall describe a reasonable range of alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project.

To comply with CEQA's requirements, each alternative that was suggested or developed for this project was evaluated in three ways:

1. Does the alternative meet most of the basic project objectives?
2. Is the alternative feasible (i.e., legal, regulatory, technical)?
3. Does the alternative avoid or substantially lessen any significant effects of the proposed project, including consideration of whether the alternative itself could create significant effects potentially greater than those of the proposed project?

The Alternatives Screening Report (Appendix E) provides more detail about the evaluation process for each alternative.

3.3 ALTERNATIVES SCREENING METHODOLOGY

The evaluation of alternatives to the proposed project was completed using a screening process that consisted of the following steps:

1. Identify significant impacts of the proposed project
2. Review and evaluate the SDG&E alternatives evaluation process
3. Identify alternative methods of meeting objectives that would avoid a significant effect
4. Evaluate each alternative using CEQA criteria (defined below)
5. Determine the suitability of each alternative for full analysis in the EIR

Infeasible alternatives and alternatives that did not offer any potential for overall environmental advantage were removed from further analysis. Following the screening process, the advantages and disadvantages of the remaining alternatives were carefully weighed with respect to CEQA's criteria for consideration of alternatives.

3.3.1 Significant Environmental Impacts

Potentially significant environmental impacts resulting from the proposed project were evaluated to develop alternatives and determine whether an alternative would meet CEQA Guidelines Section 15126.6 requirements. Table 3.3-1 presents a summary of the significant

environmental effects of the proposed project (prior to applying mitigation). Impacts on Aesthetics, Noise, and Recreation would be significant even after mitigation.

Table 3.3-1 Summary of Significant Environmental Impacts of the Project

Issue Area		Impact
4.1	Aesthetics	**Impact Aesthetics-1:** Potential to substantially degrade the existing visual character or quality of the site and its surroundings during construction (*Significant and unavoidable*) **Impact Aesthetics-2:** Potential to substantially degrade the existing visual character or quality of the site and its surroundings during operation (*Less than significant with mitigation*) **Impact Aesthetics-3:** Potential to substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway or designated scenic roadway during construction (*Significant and unavoidable*) **Impact Aesthetics-4:** Potential to substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway or designated scenic roadway during operation (*Less than significant with mitigation*) **Impact Aesthetics-6:** Potentially create a new source of substantial light or glare that would adversely affect day or nighttime views in the area (*Less than significant with mitigation*)
4.3	Air Quality	**Impact Air-2**: Violate any air quality standard or contribute substantially to an existing or projected air quality violation (*Less than significant with mitigation*)
4.4	Biological Resources	**Impact Bio-1:** Potential for substantial adverse effect from project construction, either directly or through habitat modifications, on any plant species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS (*Less than significant with mitigation*) **Impact Bio-2:** Potential for substantial adverse effect from project construction, either directly or through habitat modifications, on any invertebrate species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or the USFWS (*Less than significant with mitigation*) **Impact Bio 4:** Potential for substantial adverse effect from project construction, either directly or through habitat modifications, on any avian species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or the USFWS (*Less than significant with mitigation*) **Impact Bio 5:** Potential for substantial adverse effect from project construction, either directly or through habitat modifications, on any mammalian species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or the USFWS (*Less than significant with mitigation*) **Impact Bio 6:** Potential for substantial adverse effect from project operation and maintenance, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or the USFWS (*Less than significant with mitigation*) **Impact Bio-7:** Potential to cause a substantial adverse effect on any

	Issue Area	Impact
		riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS (*Less than significant with mitigation*) **Impact Bio-8:** Potential to cause a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (*Less than significant with mitigation*)
4.5	Cultural and Paleontological Resources	**Impact Cultural-1:** Cause a substantial adverse change in the significance of an archaeological resource as defined in CEQA Guidelines Section 15064.5 (*Less than significant with mitigation*) **Impact Cultural-2:** Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5 (*Less than significant with mitigation*) **Impact Cultural-4:** Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (*Less than significant with mitigation*)
4.6	Geology and Soils	**Impact GeologySoils-4:** Potential for substantial soil erosion or the loss of topsoil (*Less than significant with mitigation*)
4.7	Greenhouse Gas Emissions	**Impact GHG-2:** Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of greenhouse gases (*Less than significant with mitigation*)
4.8	Hazards and Hazardous Materials	**Impact Hazards-1:** Potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through accidental release of a hazardous material through upset or accident conditions (*Less than significant with mitigation*) **Impact Hazards-3:** Potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school (*Less than significant with mitigation*) **Impact Hazards-6:** Potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (*Less than significant with mitigation*) **Impact Hazards-7:** Potential to expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands (*Less than significant with mitigation*)
4.9	Hydrology and Water Quality	**Impact Hydro-1:** Potential to violate any water quality standards or waste discharge requirements (*Less than significant with mitigation*) **Impact Hydro-3:** Potential to substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or off site (*Less than significant with mitigation*) **Impact Hydro-5:** Potential to create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff or otherwise degrade water quality (*Less than significant with mitigation*)
4.12	Noise	**Impact Noise-4:** Potential to result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity during construction (*Significant and unavoidable*)

	Issue Area	Impact
4.15	Recreation	**Impact Recreation-1:** Potential to substantially disrupt recreational activities or increase the use of recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated (*Less than significant with mitigation*) **Impact Recreation-2:** Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment (*Less than significant with mitigation*) **Impact Recreation-3:** Have a substantial adverse effect on the recreational value of existing recreational facilities during construction (*Significant and unavoidable*) **Impact Recreation-4:** Have a substantial adverse effect on the recreational value of existing recreational facilities during operation and maintenance (*Less than significant with mitigation*)
4.16	Transportation and Traffic	**Impact Traffic-1:** Conflict with an applicable plan including a congestion management plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system or other standards, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit (*Less than significant with mitigation*) **Impact Traffic-2:** Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks (*Less than significant with mitigation*) **Impact Traffic-3:** Potential to substantially increase hazards due to a design feature or incompatible uses (*Less than significant with mitigation*) **Impact Traffic-4:** Result in inadequate emergency access (*Less than significant with mitigation*) **Impact Traffic-5:** Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities (*Less than significant with mitigation*)
4.17	Utilities and Service Systems	**Impact Utilities-7:** Not comply with federal, state, and local statutes and regulations related to solid waste (*Less than significant with mitigation*) **Impact Utilities-8:** Cause substantial deterioration or damage to gas, water, or sewer pipelines (*Less than significant with mitigation*) **Impact Utilities-9:** Disrupt existing utility systems or conflict with utility ROWs (*Less than significant with mitigation*)

3.3.2 Alternatives Considered by the CPUC

Each of the alternatives considered in the Alternatives Screening Report is identified in Table 3.3-2. The alternatives retained for further consideration in this Draft EIR are described in Section 3.4. The alternatives eliminated from further consideration are described in the Alternatives Screening Report (Appendix E).

Table 3.3-2 Salt Creek Substation Project Alternatives

Alternative	Source	Type	Eliminated or Retained
Alternative 1: 230/12-kV Substation and 230-kV Loop-In	SDG&E Application	Electrical System	Retained
Alternative 2: 69/12-kV Substation and Generation at Border and Larkspur Electric Generating Facilities	CPUC CEQA Team	Electrical System	Retained
Alternative 3: 69/12-kV Substation and Underground 69-kV Power Line within Public ROW	SDG&E Application	Power Line Alignment	Retained
Alternative 4: 69/12-kV Substation and Double-Circuit 69kV Power Line within SDG&E ROW	SDG&E Application	Power Line Alignment	Eliminated
Alternative 5: Expand Existing Area Substations to Increase Capacity	SDG&E Application	Electrical System	Eliminated
Alternative 6: Loop-In TL 6910 and Reconductor Five Additional Power Lines	SDG&E Application	Electrical System	Eliminated
Alternative 7: Future East Urban Center Substation Site	SDG&E Application	Substation Site	Eliminated
Alternative 8: Village 9 Substation Site	SDG&E Application	Substation Site	Eliminated
Alternative 9: Regional Technology Park Substation Site	SDG&E Application	Substation Site	Eliminated
Alternative 10: 300 meters south of Hunte West Substation Site	Public Scoping	Substation Site	Eliminated
Alternative 11: Hunte East Substation Site	SDG&E Application	Substation Site	Eliminated
Alternative 12: McMillan Eastern Urban Center Substation Site	SDG&E Application	Substation Site	Eliminated
Alternative 13: Baldwin Offer Substation Site	SDG&E Application	Substation Site	Eliminated
Alternative 14: Discovery Falls Substation Site	SDG&E Application	Substation Site	Eliminated
Alternative 15: Olympic Parkway and State Route 125 Parcel Substation Site	CPUC CEQA Team	Substation Site	Eliminated
Alternative 16: 69/12-kV Substation and Underground 69-kV Power Line in Existing SDG&E ROW	SDG&E Application	Power Line Alignment	Eliminated

Alternative	Source	Type	Eliminated or Retained
Alternative 17: Energy Efficiency and Conservation Programs	CPUC CEQA Team	Electrical System	Eliminated
Alternative 18: Distributed Renewable Energy Generation	CPUC CEQA Team	Electrical System	Eliminated

3.3.3 Summary of Alternatives Analyzed in the EIR

The alternatives listed below are those that have been selected through the alternative screening process for detailed analysis in the EIR; the No Project Alternative is also included as required by CEQA. Each of the alternatives, with the exception of the No Project Alternative, would substantially meet project objectives, would be feasible, and would avoid or reduce potential environmental effects of the proposed project. The alternatives analyzed in the EIR include:

1. **Alternative 1:** 230/12-kV Substation and 230-kV Loop-in
2. **Alternative 2:** 69/12-kV Substation and Generation at Border and Larkspur Electric Generating Facilities
3. **Alternative 3:** 69/12-kV Substation and Underground 69-kV Power Line within Public ROW
4. **No Project Alternative**

3.4 ALTERNATIVES ANALYZED IN THE EIR

The three alternatives carried forward for analysis in this Draft EIR are described here. The level of detail presented here is intended to allow for an equal level of detail in consideration of potential impacts of these alternatives relative to the proposed project in the event that the CPUC selects one of the alternatives to meet the project objectives.

3.4.1 Alternative 1: 230/12-kV Substation and 230-kV Loop-In

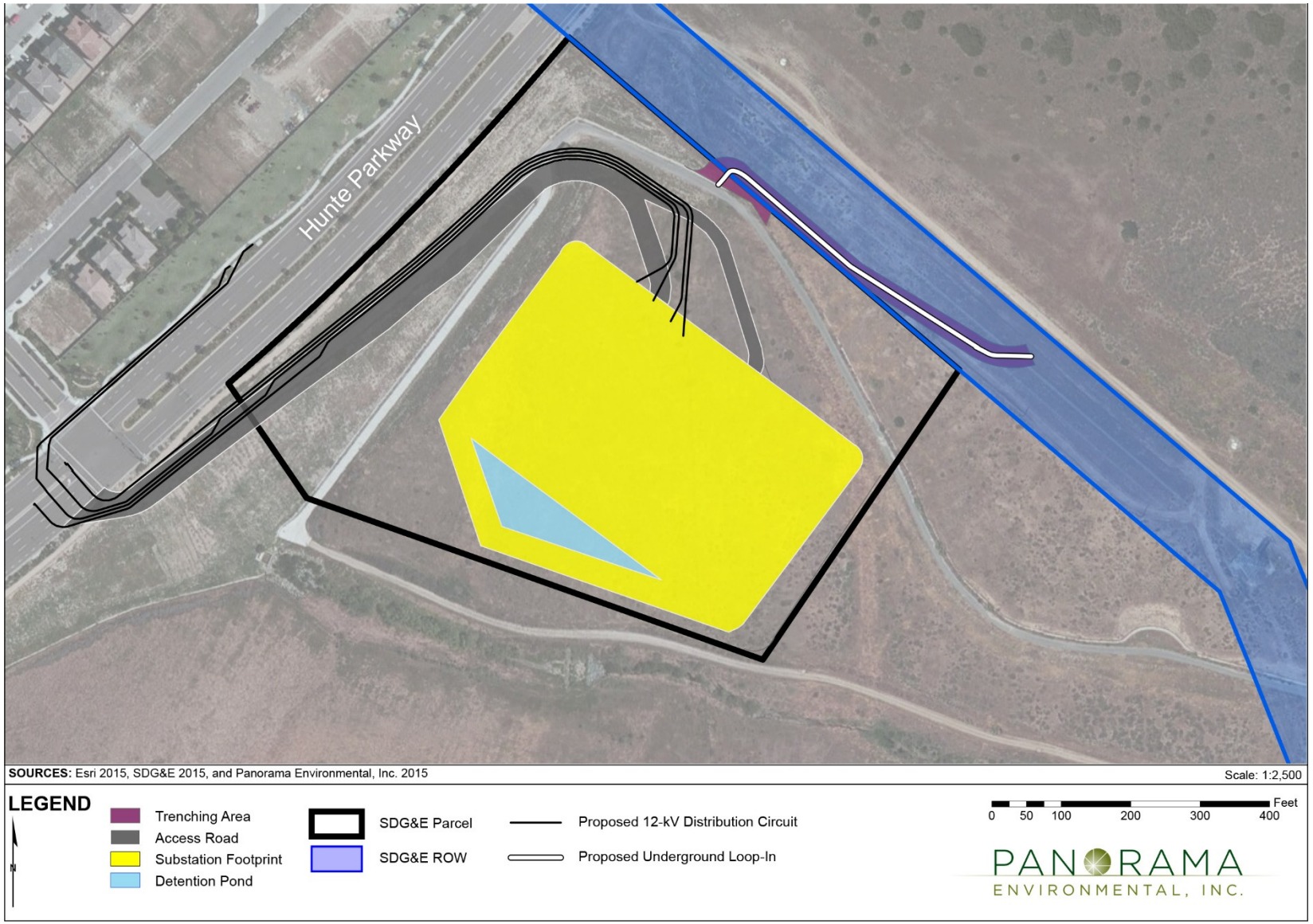
Description

Alternative 1 involves construction of a new 230/12-kV substation within the approximately 11-acre parcel that is the proposed location for the Salt Creek Substation (Figure 3.4-1). The new 230/12-kV substation would include:

- A new 230/12-kV substation along the existing ROW and south of Hunte Parkway;
- An underground loop-in of existing 230-kV transmission line to the new 230/12-kV substation; and
- A new underground 12-kV distribution circuits to connect to the existing network.

The 230/12-kV substation is a standard height substation (as opposed to the low-profile substation design of the proposed 69/12-kV substation). The larger height of the substation is required due to the larger height of the structures required in a higher voltage 230-kV substation. The tallest substation structures would be the approximately 55-foot-tall bank~~.~~

Figure 3.4-1 Alternative 1 – 230/12-kV Substation and 230-kV Loop-In



deadend and the approximately 38-foot-tall main bus structure. Estimated grading limits would include approximately 39,000 CY of cut and approximately 148,000 CY of raw fill. Additional mechanically stabilized earth (MSE) retaining walls with a height range of 2 feet to 40 feet would be required to keep grading within the proposed substation site. The 230/12-kV substation detention basin would be approximately 20,000 square feet. The dimensions of access road to the substation would be the same as the proposed project. To meet the reliability and operational flexibility of other 230-kV substations in the SDG&E bulk power system, the 230/12-kV substation would involve a breaker-and-a-half configuration rather than the single-breaker, single-bus configuration included in the proposed substation design.

Cable poles would be installed to construct the underground loop-in, which would possibly require the construction of other structure(s) within the site. The 230-kV cable poles would be approximately 150 feet tall, roughly 60 to 80 feet taller than the proposed 69-kV cable poles. The 230-kV cable poles would have a larger profile to accommodate phase spacing and the need for the 230-kV cables to come down the outsides of the poles. Underground distribution ducts would be located south of an existing sewer line.

Construction of Alternative 1 is estimated to take 24 to 30 months. At the peak of construction, approximately 40 trucks (80 trips per day) traveling up to 60 miles would be required daily for construction of the 230/12-kV substation. Larger cranes would be needed to install the taller A-frames, and a bigger hauler would be needed to transport the 230/12-kV transformers. The equipment required to construct the substation would otherwise be similar to the proposed project substation.

The quantity of SF_6 in a 230-kV circuit breaker is approximately 161 pounds, compared to approximately 33 pounds of SF_6 in each of the proposed project's six 69-kV circuit breakers. Alternative 1 would use six breakers for a total estimated quantity of 966 pounds of SF_6, which equates to estimated maximum emissions of 4.8 pounds annually (the proposed project would emit approximately 0.2 pounds of SF_6 annually). Approximately 10,000 gallons of mineral oil will be required for each 230-kV transformer, equating to 30,000 gallons total (two transformers plus a spare). The proposed would require 5,500 gallons of mineral oil for each of the two 69-kV transformers, equating to 11,000 gallons total.

Maintaining the 230/12-kV substation would require additional resources relative to the proposed project. There is no portable transformer to use when taking this equipment out for service. Maintenance on the 230-kV transformer would require offloading the circuits and putting them onto the other transformer. This would cause a reliability issue when all of the circuits are being fed off of one transformer. A spare transformer would therefore be needed to provide operational flexibility. In the event that a transformer goes out of service permanently, the lead time to replace the transformer would be approximately 18 to 24 months because the transformer would need to be manufactured since there are no spare transformers elsewhere in the SDG&E system.

Rationale for Full Analysis

Project Objectives
The 230/12-kV substation alternative would meet the three project objectives defined by the CPUC CEQA Team. The 230/12-kV substation could pose technical issues for transferring load between the 69/12-kV and 138/12-kV substations in the area. This alternative may achieve the objective of providing greater operational flexibility but to a lesser degree than the proposed project; however, it meets all of the CPUC project objectives.

Feasibility
This alternative is potentially feasible from a legal, regulatory and technical perspective. The substation would be located within SDG&E fee-owned land. The 230/12-kV substation could be constructed within the parcel without requiring additional ROW or easements.

Lessened Environmental Impacts
Alternative 1 would avoid construction of a new 5-mile-long power line between the proposed substation and Miguel Substation. A summary of the significant environmental impacts of the proposed project that would be reduced with implementation of Alternative 1 include:

- Impacts to biological resources within the transmission corridor because no poles would be installed and no construction or maintenance would be required north of Hunte Parkway
- Impacts to significant cultural resources within the transmission corridor because no poles would be installed and no construction or maintenance activities would be required north of Hunte Parkway
- Construction noise impacts at residences near the transmission corridor and staging yards because helicopters would not be required, and new power lines and power poles would be avoided in proximity to homes
- Recreation impacts because temporary trail and recreational area closures and detours within the transmission corridor would be avoided

Potential Greater or New Environmental Impacts
Alternative 1 would result in greater visual impacts at the proposed substation site. The 230/12-kV substation would be larger and taller than the proposed substation, resulting in a greater impact to views from Hunte Parkway and from trails in the Otay Valley Regional Park and Otay Open Space Preserve. The larger substation would necessitate more grading in the area, resulting in potentially greater impacts to geology and hydrology in the vicinity of the substation. The larger substation would have a longer construction timeframe and could result in greater air quality emissions and greater noise impacts on residents located near the substation site.

3.4.2 Alternative 2: 69/12-kV Substation and Generation at Border and Larkspur Electric Generating Facilities

Description

Alternative 2 would involve construction of a 69/12-kV substation at the proposed Salt Creek Substation site. The substation configuration would be identical to the proposed project. This alternative would also include loop-in of TL 6910 in the same configuration as the proposed project. This alternative does not involve installation of a new 69-kV power line along the existing ROW. System reliability would be maintained through additional energy generation at the existing CalPeak Power – Border electric generating facility (Border) and the Larkspur Energy Facility (LEF) during periods of peak demand for electricity.

The Border power plant (Figure 3.4-2) is a simple-cycle peaking electric generation facility consisting of one FT8 Pratt & Whitney Twinpac, with two natural gas turbine engines and one 49.5 MW generator. The Border facility is located in the Otay Mesa area of the City of San Diego, San Diego County, California.

The LEF is a simple-cycle, dual fueled peaking electric generation facility consisting of two GE LM6000 natural gas turbine engines generating 90 MW. The LEF is located at the corner of Harvest Road and Otay Mesa Road located in the City of San Diego, San Diego County, California (Figure 3.4-2).

Both peak generation resources at Border and LEF are currently under contract to sell power to SDG&E. The number of peaking units that would be required to implement Alternative 2 and the estimated total number of megawatt-hours per year (MWh/yr) that would be generated at the units is presented by year in Table 3.4-1. The required MWh/yr under Alternative 2 was estimated by first modeling the total power generated at the Border and LEF units under (i) the proposed project scenario (three lines into Salt Creek Substation) and (ii) the Alternative 2 scenario (2 lines into Salt Creek Substation). Because SDG&E would purchase power generated at Border and LEF even with the proposed project, the number of MWh/yr required for Alternative 2 is the difference between the total Border and LEF power generation under the proposed project scenario and the Alternative 2 scenario. The MWh/yr required for Alternative 2 was estimated for a period of 10 years following construction of the substation. A 10-year planning horizon was used in this analysis because energy planning typically uses a 10-year horizon. It would be speculative to forecast loading and electric generation requirements more than 10 years after substation construction due to uncertainties in, among other factors, future area development, energy conservation technology, and generation of distributed renewable energy beyond a 10-year planning horizon.

The electric generating facilities are permitted for operation by the SDAPCD. The LEF is permitted for 5,950 hours per year (approximately 248 days) and can run for 24 hours per day (Wildflower Energy LP 2001), yielding an annual total of 535,500 MWh/yr. The Border facility is permitted for 8,760 hours per year, i.e., 24 hours a day 7 days a week year-round, and produces 433,620 MWh/yr (CEC 2001). SDG&E currently uses 2,600 to 3,200 MWh/yr from each facility. Both facilities are operating well below their permitted operating limits. In 2014, the Border

Figure 3.4-2 Alternative 2 – 69/12-kV Substation and Generation at Border and Larkspur Electric Generating Facilities

Table 3.4-1 Power Generation at Border and LEF

Year	Estimated MWh/yr
2017	212.4
2018	226.3
2019	239.6
2020	252.0
2021	264.2
2022	276.1
2023	287.7
2024	298.9
2025	313.1
2026	328.0
2027	343.5

Source: SDG&E 2015a

facility was in operation for approximately 324 hours (16,041 MWh) and LEF was in operation for approximately 841 hours (37,860 MWh) (CEC 2015). The additional power production at Border and LEF for Alternative 2 represents less than 0.04 percent of the permitted capacity of the generating facilities and the additional generation is well within the permitted operation limits of both facilities.

Rationale for Full Analysis

Project Objectives

The 69/12-kV substation with generation at Border and LEF would meet all three project objectives defined by the CPUC CEQA Team. Alternative 2 would not construct a third 69-kV circuit into the proposed substation. The alternative would involve less redundancy in power sources to the substation and would potentially be less reliable if a fault were to occur on the existing 69-kV line (TL 6910 and proposed TL 6964). However, this alternative meets all of the CPUC project objectives.

Feasibility

This alternative is potentially feasible from a legal, regulatory and technical perspective.

Lessened Environmental Impacts

Alternative 2 would avoid construction of a 69-kV power line within the transmission corridor and would avoid all impacts associated with construction of the power line. Refer to Section 3.5.1 for a summary of the environmental impacts that may be reduced as a result of not installing a new 69-kV power line.

Potential Greater or New Environmental Impacts

The alternative would not result in any new significant impacts relative to the proposed project. The alternative would require construction of the proposed substation, 69-kV loop-in, and 12-kV distribution circuits in the same manner and configuration as the proposed project. The use of generation at Border and LEF would result in additional air quality and GHG emissions during operation and maintenance relative to the proposed project; however, this increase in emissions would be less than significant. SDG&E is currently purchasing power generated at both Border and LEF and would continue to purchase power from these facilities even if the proposed project were constructed. Alternative 2 would result in an estimated 2 to 3 percent increase in SDG&E's use of power from these facilities relative to the proposed project and would represent 0.03 percent of the permitted generating capacity for the facilities. The increased power generation in 10 years as a result of Alternative 2 is equivalent to approximately seven hours of additional run time at any one of the generating facilities.

3.4.3 Alternative 3: 69/12-kV Substation and Underground 69-kV Power Line within Public ROW

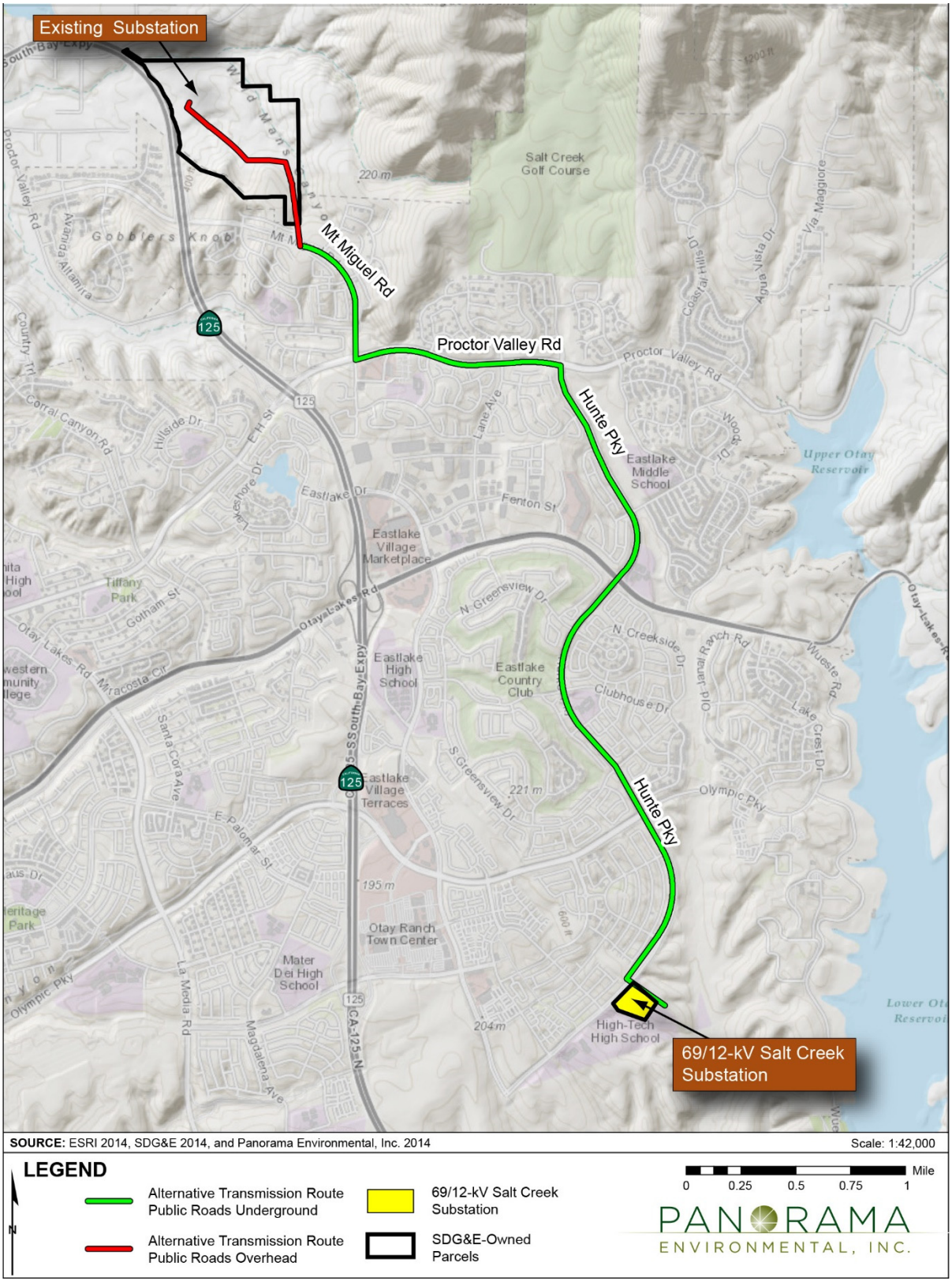
Description

Alternative 3 involves construction of a 69/12-kV substation at the proposed Salt Creek Substation site. The substation configuration is identical to the proposed project. This alternative also includes loop-in of TL 6910 in the same configuration as the proposed project. Alternative 3 would build a new underground 69-kV power line within public roads and easements to the proposed substation.

The proposed 69-kV line would be overhead within the Miguel Substation in the same configuration as the proposed project. ~~At the edge of the Miguel Substation,~~ The overhead line would continue along the SDG&E ROW until its intersection with Mountain Miguel Road, where the power line would transition underground via a cable pole. The line would then be routed underground in public roads via Mountain Miguel Road south to Proctor Valley Road, Proctor Valley Road east to Hunte Parkway, and Hunte Parkway south to the 69/12-kV substation. Refer to Figure 3.4-3 for the location of the underground alignment.

The underground cable would be approximately 6 miles long within public roads. Construction of the underground cable would require an open trench installation of the duct package and vaults. Approximately 30 vaults would be required along the underground line. The trench for installation of the duct package would be approximately three feet wide and six feet deep or more (depending on the location of other utilities) within a 16-foot-wide work area. Vaults would require a work space approximately 30 feet wide. Open trench construction typically requires excavation and haul away of soils followed by the delivery of concrete and other backfill materials. Trench construction and vault placement requires street delineation and traffic interruptions. The work area would be contained within one traffic lane. SDG&E would implement temporary lane or road closures as necessary during construction to route traffic around the work areas. Construction of the underground line would last approximately 10 to 13 months.

Figure 3.4-3 Alternative 3 – 69/12-kV Substation and Underground 69-kV Power Line in Public ROW



Rationale for Full Analysis

Project Objectives
Alternative 3 would meet all of the CPUC objectives of the proposed project by constructing a new substation and a new power line between the proposed substation and Miguel Substation.

Feasibility
Alternative 3 is potentially feasible from a legal, regulatory and technical perspective. If utilities are present within the proposed construction area, the trench depth may need to be shallower or deeper to avoid the utilities.

Lessened Environmental Impacts
Alternative 3 would avoid construction of a 69-kV power line along the existing ROW. As a result, the alternative would avoid use of helicopters for stringing the power line and associated noise impacts during power line construction. The underground line would also avoid any potential conflicts with utilities including the gas pipelines in the transmission corridor, which precludes the possibility of rupturing a gas pipeline as a result of project construction. Visual impacts would be minimized compared to the proposed project because the 69-kV power line would be installed underground.

Potential Greater or New Environmental Impacts
Alternative 3 would underground a 69-kV power line within public roads and easements. Environmental impacts that may be greater for Alternative 3 than those of the proposed project include:

- Noise impacts along Mountain Miguel Road, Proctor Valley Road, and Hunte Parkway due to use of equipment for underground power line construction
- Air quality and GHG emissions impacts from greater ground disturbance and more exhaust and dust generation over a longer period of time due to undergrounding
- Impacts to traffic and emergency access from lane closures and detours required during construction along Mountain Miguel Road, Proctor Valley Road, and Hunte Parkway
- Impacts to geology and soils from greater ground disturbance of undergrounding the power line

3.5 NO PROJECT ALTERNATIVE

CEQA requires an evaluation of the No Project Alternative so decision makers can compare the impacts of approving the project with the impacts of not approving the project. According to CEQA Guidelines (Section 15126.6(e)), the No Project Alternative must include:

- The assumption that conditions at the time of the NOP (i.e., baseline environmental conditions) would not be changed because the proposed project would not be installed; and
- The events or actions that would be reasonably expected to occur in the foreseeable future if the project were not approved.

The first condition is described in the EIR for each environmental resource as the "environmental baseline," since no impacts of the proposed project would occur. This section defines the second condition of reasonably foreseeable actions or events. The impacts of these actions are evaluated in each issue area's analysis in Section 4: Evaluation of Environmental Impacts.

Under the No Project Alternative, the proposed project would not be implemented. SDG&E would need to serve the electrical needs of the area from existing substations because energy demand will soon exceed available capacity. In order to meet energy needs in the southeast Chula Vista area, SDG&E would build out the existing Proctor Valley Substation to its maximum of four transformer banks (current configuration has two transformer banks) and construct distribution circuits to the Otay Ranch Area. These circuits would be approximately 6 to 7 miles long. This option would be a temporary solution for approximately 2 years.

As discussed in Chapter 2 of the PEA, SDG&E's current forecast shows that electric demand in the southeast Chula Vista area would exceed existing capacity in 2016 (SDG&E 2013). The southeast Chula Vista area is fed primarily from existing Telegraph Canyon and Proctor Valley Substations. The ultimate load for the area is 286-MW, a load that requires the Telegraph Canyon, Proctor Valley, and new Salt Creek Substations to each operate at optimal capacity. The Telegraph Canyon Substation is already at its maximum four-bank transformer configuration, with an 86 percent substation loading forecasted by 2016. Proctor Valley Substation, which is at a two-bank transformer configuration, has a loading of 92 percent. The No Project Alternative would result in a reduced level of reliability and would not satisfy the expected load growth for the area (SDG&E 2013).

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