E.6 New In-Area All-Source Generation – Contents

E.6 New In-Area All-Source Generation

The goal of the New In-Area All-Source Generation Alternative would be to provide adequate resources within San Diego County to eliminate any need for the Proposed Project. As one of the Non-Wires alternatives, it would avoid major new transmission projects by focusing on generation as a way for SDG&E to perform its function as a load-serving entity. The projects considered in this EIR/EIS are representative of reasonable generation scenarios, and are not intended to depend on the progress of contracts for individual utility projects. Including the components of the non-wires alternatives in the Sunrise Powerlink EIR/EIS does not automatically lead these alternatives to be built because additional approvals or agency actions would be necessary to implement them. Each generator included in the non-wires scenarios would require permitting and CEQA and/or NEPA compliance for each project.

The New In-Area All-Source Generation Alternative would include a combination of fossil-fuel fired central station and peaking generation, renewable generation, and non-renewable distributed generation (DG). The capacity provided by conventional generation projects under this alternative would include at least 620 MW from a central station power plant plus 250 MW from multiple peaking power plants assumed to come online by 2008.

This alternative also includes 203 MW of the solar photovoltaic, wind and biomass/biogas projects that are included in the New In-Area Renewable Generation Alternative discussed in Section E.5. See Table E.6.1-1 for the exact MW contribution of each of the Renewable components. Section E.6 describes only the conventional generation components of the New In-Area All-Source Generation Alternative, please refer to Section E.5 for any specific details of the New In-Area Renewable Generation Alternative.

E.6.1 Description of New In-Area All-Source Generation

E.6.1.1 Summary of Conventional Generation Projects

The New In-Area All-Source Generation Alternative would include a combination of fossil-fuel fired central station generation, renewable generation, and non-renewable distributed generation (DG). The capacity provided by conventional generation projects under this alternative would include 620 MW from the South Bay Replacement Project,[1] 750 MW from the San Diego Community Power Project proposed by ENPEX Corp., or 540 MW from the Encina Power Plant Repowering project (Carlsbad Energy Center) proposed by NRG Energy and 250 MW from multiple peaking power plants assumed to come online by 2008. The Carlsbad Energy Center could provide up to 540 MW of fast-start generation, and is considered as an option under this alternative; however, impacts of the Encina Power Plant Repowering project are not considered as part of this Alternative because the Carlsbad Energy Center filed the Application for Certification (AFC) September 14, 2007, after this Alternative had been defined and analyzed. Peaking generators could be sited at several locations including: the existing Encina Power Plant; other existing peaking power plant sites in Escondido or Chula Vista; existing SDG&E substations in San Diego and Orange Counties (e.g., the Miramar, Pala, Margarita, and

[1] LS Power withdrew the South Bay Replacement Project Application for Certification from consideration by the California Energy Commission in October 2007, after this alternative had been defined and analyzed. The South Bay Replacement Project is retained as one of two possible baseload power plants that could be constructed in the San Diego areas, even though the AFC is no longer active. Impacts of this power plant are considered to be representative of other baseload plants.

Borrego Springs Substations); or at new sites (e.g., in the Kearney Mesa district of San Diego). This alternative will consider the Pala Peaker, the Margarita Peaker, the Borrego Springs Peaker, and the Miramar II Peaker.

The conventional generation considered under New In-Area All-Source Generation Alternative includes a range of specific conventional generation projects, listed below.

- the proposed South Bay Replacement Project
- the proposed San Diego Community Power Project (also known as "ENPEX")
- the proposed Encina Power Plant Repowering
- proposed peaking gas turbines that SDG&E could procure in response to the 2008 Peaker RFO
- fossil fuel-fired distributed generation facilities.

It is assumed that either the proposed South Bay Replacement Project, or the San Diego Community Power Project (ENPEX), or the Encina Power Plant Repowering Project and the 250 MW of peakers solicited by SDG&E in the 2008 Peaker RFO can feasibly be built by 2010. Other new combined cycle projects or peaker projects may not be feasible in the 2010 time-frame because they have not yet submitted applications for permits and/or they do not have power purchase agreements.

E.6.1.2 Summary of New In-Area All-Source Generation Alternative

In addition to the gas-fired power plants described above, this alternative includes portions of the renewable components described and analyzed in Section E.5. For the wind and biomass/biogas components, this alternative includes projects one-half the size of those analyzed in Section E.5. The solar thermal component of Section E.5 is not required for this combination alternative. Solar Photovoltaics is retained at the same level as in Section E.5.

Table E.6.1-1 summarizes the ability of the New In-Area All-Source Generation Alternative to provide capacity. Figure E.6.1-1 shows the locations of the generation projects considered under this alternative.

Table E.6.1-1. Generation Projects Added by the New In-Area All-Source Generation Alternative (MW)

In-Area Resource	Incremental Firm On-Peak Capacity Added
Conventional	
San Diego Community Power, Carlsbad Energy Center (Encina,) or South Bay Replacement Plant	At least 620
Four New or Expanded Peakers	250
Total Conventional	At least 870
Renewable	
Solar Thermal	0
Solar PV	105
Wind	48
Biomass/Biogas	50
Total Renewable	203
Total Conventional + Renewable	At least 1,073
Non-Renewable DG	~~0~~35 (before 2016)
Demand Response (Optional)	231

Applicable Regulations, Plans, and Standards and Significance Criteria. The New In-Area All-Source Generation Alternative would be located within San Diego County and as such would be subject to the federal, State, and regional environmental regulations, plans and standards applicable to this region as detailed in Section D.16 and Appendix 2. The New In-Area All-Source Generation Alternative would use the same Significance Criteria as the Proposed Project based primarily on the CEQA Guidelines Appendix G as detailed in Sections D.2 through D.15.

Figure E.6.1-1. Components of New In-Area All-Source Generation Alternative
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E.6.1.3 South Bay Replacement Project (SBRP)

Background and Description. ~~LS Power proposes to construct and operate t~~The South Bay Replacement Project (SBRP)~~, which~~ would be a nominal 620 MW gas-fired combined cycle power plant (of which 120 MW would result from duct firing, or the direct combustion of natural gas in the heat recovery steam generator; however, this direct combustion occurs at a lower fuel efficiency rate than the main unit). The SBRP would replace the existing South Bay Power Plant (SBPP) which has a generating capacity of 700 MW and is operated by LS Power.

The intent of the proposed SBRP project is to provide sufficient reliable replacement power to the SDG&E system to allow for the removal of the Reliability Must Run (RMR) status of the existing South Bay Power Plant. Presently, and in the absence of the proposed Sunrise Powerlink Project, retiring the existing South Bay Power Plant is not allowed because of the RMR contracts, which require South Bay to be operable.

If the existing South Bay Power Plant were removed and relocated to the adjacent site, this, would allow 115 acres of the Chula Vista Bay Front (at the old site) to be redeveloped. It would also enable the relocation of the existing South Bay Substation (an established plan between the City of Chula Vista and SDG&E). The new SBRP would make effective use of a brownfield site owned by the Port of San Diego and provide generation infrastructure in the vicinity of existing transmission lines, gas pipelines, and sewer lines.

LS Power filed an Application for Certification (AFC) for the proposed SBRP with the California Energy Commission (CEC) on June 30, 2006. On August 30, 2006, the CEC deemed that the AFC for SBRP was complete and commenced its permitting review of the project.[2] Decisions in February and March 2007 by the City of Chula Vista and the Port of San Diego indicate that the power plant faces opposition. In October 2007, the Applicant withdrew the AFC in the CEC proceeding.

SBRP Location. The SBRP would be located immediately adjacent to and south of the existing South Bay Power Plant in the City of Chula Vista, California. The new SBRP would be constructed on a 12.9-acre site with a new substation on another 6.5 acres, immediately adjacent to the San Diego Bay. The property is owned by the Port of San Diego and is within the boundaries of the City of Chula Vista, in San Diego County. A 33-acre parcel would be leased from the Port of San Diego. The site is relatively flat, except for a berm surrounding the former LNG storage tanks. The project site is bounded by San Diego Bay on the west and Bay Boulevard and Interstate 5 (I-5) on the east. To the south is a salt production facility and to the north is the existing SBPP. The immediate area around the SBRP site is zoned "General Industrial," with residential housing approximately 1,000 feet to the southeast and east of the project site.[3]

The property is also included in the Chula Vista Bay Front Plan, which encompasses over 450 acres of bay front properties. The property is designated part of the roughly 70-acre "Energy/Utility Zone."[4] Figure E.6.1-2a shows the location of the SBRP generating facility, electric transmission lines, natural gas supply pipeline, and potable water supply line.

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2 Minutes of the August 30, 2006 Energy Commission Business Meeting, available at http://www.energy.ca.gov/business_meetings/2006_minutes/2006-08- _MINUTES.PDF, p. 4.

3 Minutes of the August 30, 2006 Energy Commission Business Meeting.

4 California Energy Commission South Bay Replacement Project, Project Description. Available at http://www.energy.ca.gov/sitingcases/southbay/index.html

SBRP Major Components. The information included in this description is summarized from the SBRP AFC. The AFC was prepared by the LS Power South Bay, LLC and contains a detailed description of the SBRP, an assessment of the SBRP's likely impact on the existing environment, measures proposed by the Applicant to mitigate potentially significant, environmental impacts, and a discussion of compliance with applicable laws, ordinances, regulations, and standards. The SBRP AFC can be found on the CEC website, Power Plant Projects since 1999.

The SBRP would include two natural gas–fired, heavy-duty combustion turbines rated at approximately 170 MW each in a combined cycle arrangement. Each combustion turbine would exhaust into a heat recovery steam generator (HRSG) equipped with supplemental firing. Steam from the HRSGs would be admitted into a condensing reheat steam turbine with an approximate capacity of 310 MW. Nominal base load plant rating would be 500 MW at 62°F. With supplemental HRSG firing, output would be approximately 620 MW at 62°F ambient temperature. Emissions from the combined-cycle system would be controlled by using dry low NOx combustors, and integral to the HRSG would be a selective catalytic reduction system with ammonia injection for the control of NOx and an oxidation catalyst system for the control of CO and VOC emissions.

The proposed SBRP would be substantially more efficient than the existing South Bay Power Plant. The heat rate would be approximately 7,000 BTU/kWh, net, in comparison to the existing 10,000 to 12,000 BTU/kWh, net). This would be an increase in thermal efficiency of 30 percent over the most efficient existing unit at South Bay and a 42 percent increase in efficiency over the existing unit with the lowest efficiency.

The SBRP project would completely eliminate the existing South Bay Power Plant's "once-through" cooling system and the use of San Diego Bay water by including an air-cooled condenser (ACC) or "dry cooling" system. The air cooled condenser would be used to condense the steam turbine exhaust steam, and it would use a small amount of treated potable water as part of a closed loop water circulating system. By retiring and demolishing the existing South Bay Power Plant, the use of once-through cooling water would cease, and no bay water would be used by the proposed SBRP.

Major plant buildings would include an administration/control room building, a water treatment building, a maintenance/warehouse building, combustion turbine generation and steam turbine generation buildings, and other enclosures. The facility would also include pipelines for natural gas, potable water and wastewater.

The SBRP would be constructed on a brownfield site and designed to be much more compact and enclosed than the existing power plant. The SBRP would have architectural elements and landscaped areas that will be used for screening. The HRSG stack height would be 125 feet to comply with air quality standards. The air cooled condenser would also be a major structure and a primary source of noise. Figure E.6.1-2b is a photosimulation prepared by the Applicant.

Figure E.6.1-2a. New In-Area All-Source Generation Alternative, South Bay Replacement Project

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Figure E.6.1-2b. Photosimulation of South Bay Replacement Project and Adjacent Switchyard

Other Proposed Features of SBRP. The following list summarizes other aspects of the current SBRP proposal.

- **Natural Gas Supply.** SBRP would install approximately 3,700 feet of new 16-inch pipeline to connect to SDG&E's existing 16-inch and 24-inch natural gas lines that supports the existing South Bay power plant. The connections to these existing natural gas lines would occur within an existing SDG&E easement that parallels the west side of Bay Boulevard. The SBRP would use 112 million scf/day compared to 177 million scf/day used by the existing plant.
- **Water Supply.** SBRP would minimize water consumption by using an air cooled condenser system. Potable water would be supplied through an approximately six inch diameter pipeline to an existing Sweetwater Authority water main along Bay Boulevard, approximately 430 feet east of the site. SBRP would use a maximum of 129 acre-foot per year (average daily use of 80 gallons per minute) of fresh water for process and domestic water needs. Sweetwater Authority provided a "Will Serve" letter dated April 19, 2006.
- **Wastewater Disposal.** Effluent would occur from the oil water separator, discharge from the cycle makeup treatment system including filter backwash and reverse osmosis rejection, and discharge from the plant sanitary system. This combined water would disposed of via the City of Chula Vista's sanitary sewer system and is estimated at 94 acre-foot per year. An approximately six-inch diameter sewer line connection would exit the SBRP eastern property line to connect to the City's system about 400 feet away along Bay Boulevard. The City of Chula Vista provided a "Will Serve" letter to SBRP for the connection to the sewer system. It is anticipated that the SBRP would be permitted to discharge a maximum 100,000 gpd, with a 300,000-gallon wastewater storage tank for flow control.
- **Hazardous Materials.** A Hazardous Materials Business Plan/Contingency Plan (HMBP), a Spill Prevention Control and Countermeasure Plan (SPCC), and a SWPPP would be developed in accordance with applicable regulations and RWQCB requirements. A Risk Management Plan (RMP) would also be required for aqueous ammonia in accordance with the requirements of the California Accidental Release Prevention program.

- **Noise Abatement.** The primary sources of noise would be the air cooled condenser, combustion turbine generator package, the cooling water heat exchanger, and the fuel gas compressors. Noise mitigation strategies would consider both architectural and equipment aspects.

SBRP Construction. SBRP construction would begin with the demolition of existing structures and foundations associate with the former 33-acre Liquefied Natural Gas (LNG) facility, preparations and grading of laydown and parking areas, and grading and construction of the SBRP. The construction phase would affect approximately 20 acres of Port of San Diego property that is leased by LS Power. It would also impact approximately 7.0 and 13 acres on the former LNG site for the temporary laydown and parking areas on property leased from the Port of San Diego by LS Power. Initial site preparation, removal of old foundations on the former LNG site, and construction activities are expected to take approximately 28 months (CEC, 2006).

Demolition of Existing South Bay Power Plant. After the EIR/EIS analysis was underway, the SBRP applicant withdrew its AFC from consideration at the Energy Commission. Because the SBRP AFC was withdrawn in October 22, 2007, it now appears that a new power plant will not be constructed at the Chula Vista site. For this analysis, however, the impacts of constructing and operating the SBRP are considered to be *representative* of a new baseload power plant that could be located in several areas within the San Diego area. Therefore, while the impacts of demolition of existing on-site structures (e.g., from the former LNG site) are included in this analysis, the impacts of demolition of the existing South Bay Power Plant are not evaluated. However, in the analysis in Section E.6.3 (Visual Resources), because the simulations presented are based on the AFC, the demolition of the existing South Bay Power Plant is illustrated.

SBRP Transmission Interconnection. Interconnection with the high voltage transmission system would be through a relocated South Bay Substation, which will be on the site of the SBRP and require 400 feet of new transmission lines. On November 13, 2006, the CAISO issued its final approval for the interconnection of the SBRP (CAISO, 2006). Following removal of the South Bay Power Plant, construction of the new substation for SBRP would occur on approximately 6.5 acres of Port of San Diego property leased by SDG&E.

The existing South Bay Power Plant is connected to SDG&E's existing 69/138 kV South Bay Substation. System studies have determined that the SBRP should be interconnected at each of the three major voltages (69 kV, 138 kV and 230 kV) in the area. SDG&E plans to relocate their existing 69 / 138 kV South Bay Substation to a new location adjacent to the site, and incorporate SDG&E's new 230 kV facility. Therefore, the SBRP 230 kV interconnection would occur in a new 230 kV substation located at the site of the future relocated substation.

SBRP Operation. According to the AFC, the current South Bay Power Plant has a capacity rating of 700 MW and consists of four gas-fired steam generation units and a diesel-fired combustion turbine. Thus, if the SBRP (620 MW) replaces the existing South Bay plant, then there would be a reduction in generating capacity at the South Bay site of approximately 80 MW. As a result of the CAISO dispatch instructions, the existing SBPP produced an average of around 1,800 GWh (gigawatt-hours) per year during 2004 and 2005, achieving a capacity factor of approximately 30 percent. It is anticipated that the new plant would serve similar electrical loads as those served by the existing plant.

The existing South Bay Power Plant draws water from San Diego Bay, while the proposed SBRP would convert the once-through cooling system to a dry cooling system to alleviate concerns about the potential for marine biological impacts. The SBRP would use only small quantities of potable water. Discharge

of wastewater would also be relatively small. Potable water for drinking, safety showers, fire protection, service water, and sanitary use would be served from the local potable water system via a new six-inch diameter sewer line connected to the City's system about 400 feet away.

Impact Analysis for the SBRP. Unless otherwise noted in impact assessments, the significance criteria presented in Section D also apply to this analysis.

E.6.1.4 San Diego Community Power Project

The San Diego Community Power Project (SDCPP) would be constructed by ENPEX Corp. and would be a nominal 750 MW gas-fired combined cycle power plant. The heat recovery steam generators would incorporate duct burners, designed to burn only natural gas, to provide additional generation capacity during peak demand periods, such as the summer months. SDCPP has been under development by ENPEX since 2000. The project site would be on the Marine Corp Air Station (MCAS) Miramar property near the City of Santee, with a likely electrical interconnection to the SDG&E Sycamore Canyon Substation.[5]

The proposed SDCPP at Miramar has been designed by ENPEX to serve as another potential generation option to replace the existing South Bay Power Plant. The actual capacity built by ENPEX may be 500 MW with possible additional capacity to be installed in the future as the need for power increases. The actual capacity constructed could depend on the market for electricity, availability of emission offset credits, and various other criteria that impact plant size determination. ENPEX has indicated that they might seek a permit to construct a larger plant than may be constructed to provide for future expansion capability.[6]

ENPEX believes that siting SDCPP at MCAS Miramar provides access to future San Diego energy demands. Close proximity to existing transmission lines and natural gas pipelines and reclaimed water sources were other key advantages of the site at MCAS Miramar. ENPEX believes that MCAS Miramar is attractive from a land use compatibility standpoint because of undeveloped areas that could provide a buffer for populated areas.[7] The City of Santee, however, opposed the power plant in early 2007 based on a proposal to develop 1,380 homes on land east of the SDCPP site (the Fanita Ranch development).

The SDCPP's development status is unclear, but it is identified in the CAISO transmission interconnection queue.[8] In April 2006, a Siting and Feasibility Study for the Proposed Electrical Generating Plant at MCAS Miramar was prepared for the Marine Corps.[9] The SDCPP has not submitted an application for certification (AFC) to the CEC.

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5 San Diego Community Power Project, available at http://www.enpex.com.

6 Ibid. Appendix G.

7 Ibid. p.ES-3.

8 Cal ISO letter approving South Bay Re-Power Interconnection November 13, 2006, available at http://www.energy.ca.gov/sitingcases/southbay/documents/others/2006-11-13_CA_ISO.PDF, p. 3.

9 URS (2006) Siting and Feasibility Study for the Proposed Electrical Generating Plant at MCAS Miramar (2006).

SDCPP Location. Figure E.6.1-3 illustrates potential locations of SDCPP adjacent to MCAS Miramar that were identified in 2006 Siting and Feasibility Study.[10] This EIR/EIS defines the alternative component to be 60 acres at Site 1D. The area of MCAS Miramar east of I-15, referred to as East Miramar, includes training areas, rifle/pistol ranges and ordnance storage in addition to proposed military family housing sites.[11] The proposed SDCPP would be located on a 60-acre site owned by Marine Corps Air Station Miramar. Approximately 20 acres of the site would be used to accommodate the plant facilities and 20 acres would be needed to provide a construction laydown area. An additional 20 acres of land would be set aside to support the potential development of a second 750 MW plant to support future energy demands.

SDCPP Major Components. The proposed 750 MW combined cycle power plant would include a power island, switchyard, electrical control rooms, administration buildings, storage tanks, and ancillary facilities (utility and road connections).

The power island would consist of three advanced technology combustion turbine generators (CTGs), three heat recovery steam generators (HRSG), one steam turbine generator, and an air-cooled steam condenser (ACC) system. The air inlet system for the gas turbines would include evaporative coolers to increase power output during hot weather, and the HRSGs would include duct burners for power augmentation during peak power demand periods. The gas turbines and duct burners would be fueled exclusively with natural gas. Emissions would be controlled by a combination of dry-low NOx burners in the combustion turbines and post combustion control via ammonia injection and selective catalytic reduction along with an oxidation catalyst system in the HRSG. The stack height would be approximately 150 feet, and the ACC system would be approximately 100 feet tall.

Ancillary utility and road connections would need to be established. Natural gas would be provided via the SDG&E natural gas pipeline system. On-site fuel gas compression may be required to boost the pressure to that required by the combustion turbines. As such, two electric motor-driven gas compressors would be provided along with a sound attenuation enclosure or building.

An existing 14-inch main water line extends to the north end of Strathmore Road in Santee and would be the expected tie for water to the site from City of San Diego Municipal Water District. A new 4-inch diameter pipeline (PVC material) would be required to deliver up to 200 gpm of water to the proposed SDCPP. The pipeline would be underground for its entire length at a depth of 36 inches.

A new 30-foot-wide, approximately 2 miles of asphalt road would provide access to the site. The road would be designed for the delivery of large and heavy equipment. In addition, it is expected that the north end of Santee Lakes Blvd would be extended to the north end of the Santee Lakes and then run west to the project site. This 20-foot-wide paved loop road would provide access to the power plant facilities.

Other Proposed Features of SDCPP. The following list summarizes other aspects of the current SDCPP proposal.

- **Natural Gas Supply.** SDCPP would tie into a SDG&E existing 20-inch line along Mast Blvd, near where the SDG&E's existing 36-inch pipeline terminates in Santee. The pipeline would be buried within existing roadways/public right of way (ROW). One proposed route for the new gas pipeline

[10] URS (2006).

[11] Ibid.

is under/along the roads that trend North along Fanita Parkway and Santee Lakes Blvd to the north end of the sewer treatment plant. The pipeline would then continue west, buried in the ROW along the new access road to the SDCPP project site.

- **Water Supply.** SDCPP would use water for HRSG boiler makeup, CTG evaporative cooler makeup, water treatment regeneration, HRSG blowdown quench, service/domestic, and miscellaneous plant uses. It is expected that the water line would be buried within the same ROW as the natural gas pipeline route, beneath or along existing and new roads to minimize impact on surrounding land. Recycled ~~Gray~~ water would also be used from the neighboring wastewater treatment plant to meet all process water makeup requirements based on an air-cooled plant. An alternative source of recycled ~~gray~~ water would be from the Padre Dam Municipal Water District in Santee. The pipeline location for recycled ~~gray~~ water has not been identified. The average water use would be approximately 117,360 gpd or 82 gpm.
- **Wastewater Disposal.** Wastewater would be generated from a number of sources within the plant, including HRSG boiler blowdown and steam cycle drains, water treatment regeneration waste, CTG evaporative cooler blowdown, oil-water separator discharge, and sanitary drains. The peak combined wastewater stream could reach 171,700 gpd or 119 gpm. All wastewater will be routed to the local sewer for disposal. Approximately, 1.0 mile of new 6-inch diameter pipeline (PVC material) would be required to transport up to 120 gpm of wastewater from SDCPP to the Padre Dam Sewage Treatment Facility.
- **Hazardous Materials.** SDCPP would implement accident prevention and mitigation measures regarding the use and storage of hazardous materials. These measures include risk management plans, hazard assessments, release prevention programs, emergency response plans, process management systems, employee training, and adherence to sound design standards and operating procedures. Where choices of materials are available, materials with reduced hazards would be selected and storage would be designed to contain leaks or spills.
- **Visual Elements.** SDCPP would require exterior lighting 365 days per year for normal operations. Typical outdoor lighting would be 10 ft-candles (100 LUX) on the Steam Turbine Generator (STG) deck. Exterior lighting would have overhead hoods to reflect the light downward. Temporary lighting would be installed under the temporary tarp over the turbine enclosure during maintenance operations.
- **Noise Abatement.** SDCPP would be designed to produce noise levels of less than 65 decibels at 400' from the plant site.

SDCPP Construction. Plant construction would occur over a 24-month time period. There would be an average and peak onsite construction workforce of approximately 240 and 350 individuals, respectively. This workforce would consist of laborers, craftsmen, supervisory personnel, support personnel, and construction management personnel, and mobile trailers or similar temporary facilities would be used for construction offices. Parking for construction personnel and visitors would be provided on-site and off-site. Temporary construction laydown and storage areas for large equipment and materials would also be on-site and off-site as required. Temporary construction laydown and storage areas for large equipment and materials would be on-site and off-site as space permits. Disturbed areas would be re-vegetated following construction.

Most heavy equipment would be transported by rail or ship to depots near the site and offloaded onto trucks for delivery to the site. Construction would typically occur during 6 a.m. and 5:30 p. m.,

Monday through Friday. Additional hours may be necessary to make up schedule deficiencies or to complete critical construction activities.

SDCPP Transmission Interconnection. SDCPP would connect to the SDG&E Sycamore Canyon Substation via an existing 230 kV transmission line. Approximately 0.5 to 1.0 miles of new 230 kV line would be required to loop into SDG&E existing 230 kV Miguel–Sycamore Canyon transmission line. This 230 kV line will run through undeveloped land, exclusively within the MCAS Miramar. The SDG&E Transmission System Impact Study for this interconnection is currently being developed.

SDCPP Operation. The plant would be designed to operate as a base load plant, approximately 8,000 hours or more per year. However, the plant would also be designed for cycling operations and thus could be dispatched to meet power demand requirements. Significant load following capability is possible by partial loading the plant in configurations utilizing three, two or one gas turbines. The turndown capability of an individual gas turbine is about 5 percent. ENPEX estimates approximately 75 starts/stops per gas turbine per year for each turbine. ENPEX proposes to maintain the plant for high availability and reliability. The plant's capacity factor would depend on the provisions of the power sales agreement as well as market prices of electricity, natural gas, and ancillary services. The plant would be designed for operating flexibility to meet changing market conditions.

E.6.1.5 Peaking Power Plants in Response to 2008 Peaker RFO

This alternative would include various peaking power plant projects that could be developed in order for SDG&E to comply with prior CPUC rulings. On August 15, 2006, CPUC President Peevey issued an Assigned Commissioner's Ruling in Rulemaking R.06-02-013 ordering SDG&E to provide the CPUC with information regarding the need for peaking resources for the summer of 2007.[12] This ruling was in response to the heat storm during the summer of 2006. On August 31, 2006, SDG&E responded to President Peevey's ruling and indicated that, in addition to an increased level of demand response associated with its air conditioner cycling program, SDG&E would also issue an expedited solicitation (the 2008 Peaker RFO) for new utility-owned peaking resources for 2007 and 2008.[13] A peaking power plant is one that is generally run only when there is a high demand for energy, known as the peak demand.

In Application A.07-05-023, filed May 11, 2007, SDG&E selected five proposals for a total of approximately 229 MW. The five proposals are contracts for peakers at Pala and Margarita, "plus a proposal for a fee-for-service development at Borrego Springs, an expected engineering/procurement/construction contract for Miramar II and exercise of an option on distributed generation. The three projects not presented [in this application] will be filed at a later time." (SDG&E, 2007)

The SDG&E RFO solicited offers to develop peaking resources on each of the four sites, and the option for distributed is described in Section E.6.1.5. The combined capacity of the power plants identified here would be over 250 MW (as shown in Table E.6.1-1).

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[12] Assigned Commissioner's Ruling Addressing Electric Reliability Needs in Southern California for Summer 2007, R.06-02-013, August 15, 2006.

[13] Response Of San Diego Gas & Electric Company (U 902 E) To The Assigned Commissioner's Ruling Addressing Electric Reliability Needs In Southern California For Summer 2007, R.06-02-013, August 31, 2006.

Figure E.6.1-3. New In-Area All Source Generation Alternative, San Diego Community Power Project
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Figure E.6.1-4a. General Equipment Layout for Peaker Power Plant Miramar
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Figure E.6.1-4b. Pala Peaker Plant Site
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Figure E.6.1-4c. Margarita Peaker Power Plant Site
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Figure E.6.1-4d. Borrego Springs Peaker Power Plant Site
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Descriptions of each potential power plant included with this alternative follow. Figures E.6.1-4a through E.6.1-4d show the locations of the four peaker projects.

Pala Peaker

The Pala peaking power plant is proposed by Orange Grove Energy, L.P., owned by J-Power, USA Development Company (J-Power). The developer would lease 8.5 acres of a 202-acre property from SDG&E after exercising its option for a 25-year Power Purchase Agreement ("PPA") with the utility for two simple cycle gas-fired turbine units with a net capacity of about 96 MW. The project would interconnect to SDG&E's existing 69 kV transmission system at the Pala Substation and has a commercial on-line date of May 31, 2008. The developer filed an application for environmental review (Small Power Plant Exemption, SPPE) by the California Energy Commission as the Orange Grove Energy project in July 2007.

Existing Pala Substation. SDG&E's existing Pala Substation is located in the 10300 block of Pala Road (State Route 76) in Pala which is located in northern San Diego County within proximity to the Pala Indian Reservation. The Pala Substation is located on 15 acres of mildly sloping land.

Pala Peaker Location and Setting. The Pala peaker project site is located in rural north San Diego County about five miles east of the City of Fallbrook and approximately two miles west of the community of Pala, north of SDG&E's Pala Substation. The site is located at the intersection of SR76 (Pala Road) with Pala Del Norte Road approximately 3.5 miles northeast of Interstate 15 (I-15), just north of the existing Pala Substation. The Pala peaker project would be sited on 8.5 acres that would be leased from SDG&E. The majority of the site has been used for agriculture and is occupied by a former citrus grove. A fenced SDG&E storage area exists just south of the site on the adjacent parcel, and is an area that will be temporary used for construction laydown. A portion of the site proposed for development includes an existing orchard and a fenced in area with a few small structures. Depending on the development of the project, some or all of the structures may need to be demolished. In addition, the site has limited water supply. Figure E.6.1-4b shows the existing fruit grove and proposed site layout.

Pala Peaker Major Components. The Pala peaker project would install a 96 MW simple-cycle electric generating plant, including two combustion turbine generators (CTGs), auxiliary equipment, and ancillary facilities (roads and landscaping). Gas, water, and transmission line interconnection would be installed and operated by the appropriate utilities, described below.

The CTGs would use advanced technology for efficiency and emissions control. The CTG combustion air flows through an air inlet filter system and chilled water cooling coils and associated inlet ductwork. De-mineralized water is injected into the combustion zone in order to increase power output and reduce emissions, especially during hot weather operation. Both turbines would share a chilled water system package containing non-toxic and CFC-free refrigerant.

Natural gas would be delivered by SDG&E via a new connection to an existing nearby pipeline. Three 50%-capacity electric motor-driven gas compressors, one per CTG and one backup, would boost the fuel supply pressure to the pressure required for the combustion turbines. The compressors would be located within an acoustically treated building to reduce noise emissions.

Other Features of Pala Peaker

- **Natural Gas Supply.** An approximately 2.0-mile underground gas pipeline lateral would be constructed along State Route 76 to convey natural gas to the Site from an existing SDG&E 16-inch gas transmission line west of the project site. Preliminary design is for a 10-inch diameter lateral that would deliver approximately 960 MMBtu/hr (HHV) of fuel gas to the site pressurized at 340 psig. SDG&E would construct, own, and operate the gas interconnection.
- **Water Supply.** The proposed Pala generator would require water for packaged cooling towers. Approximately 1.5 miles of underground water pipeline would be constructed to convey water to the site from an existing Rainbow Municipal Water District (RMWD) water main. RMWD would own and operate the water pipeline. An alternative means of water supply, if necessary, would be delivery by truck. A 2-day backup supply of raw water would be stored on site in a 375,000-gallon water storage tank (approximately 40 feet diameter and 40 feet tall). De-mineralized water for injection into the turbines and CTG compressor wash would be supplied by twin trailer-mounted de-mineralize systems, which would be filled off-site. The natural gas fuel compressors and CTG lubricating oil systems would be air cooled and require no additional water. Average water use would be approximately 104,050 gpd or 72.7 gpm.
- **Wastewater Disposal.** Wastewater would be generated within the plant primarily from chiller system cooling tower blowdown and sanitary drains. The peak combined wastewater stream could reach 74,423 gpd or 52 gpm. Chiller blowdown as well as general drain wastewater would be routed to the wastewater storage tank for tanker truck removal and offsite processing and reuse. Drains from areas that potentially could contain oil or grease, such as the combustion turbine compartments, route wastewater to a separate emergency containment tank for pump-out and off-site disposal.
- **Hazardous Materials.** The plant would be a small quantity generator for hazardous waste under 22 CCR Division 4.5. The developer would implement accident prevention and mitigation measures regarding the use and storage of hazardous materials. These measures include risk management plans, hazard assessments, release prevention programs, emergency response plans, process management systems, employee training, and adherence to sound design standards and operating procedures.
- **Emission Control Equipment.** Water injection in the turbine generators, described above, is designed to reduce NOx levels. In addition, each CTG unit would be equipped with a CO oxidation catalyst that will reduce the CO emission to 6.0 ppm, as well as an aqueous ammonia (19% wt) selective catalytic reduction (SCR) system that will further reduce the NOx emissions to 2.5 ppm, assuming 15% O2.
- **Visual Elements.** Exterior lighting will generally use downward-directed high-pressure sodium lamps and will be either 120-volt or 240-volt. Lighting contactors and photocells will be used to control exterior lighting. Timers would be included if needed to mitigate exterior lighting during overnight hours in accordance with County requirements. All indoor lighting systems are anticipated to be 120-volt equipment, excepting manufacturer-provided equipment lighting.
- **Noise Abatement.** The closest sensitive receptors are residences 0.4 to 0.6 miles northeast of the project site. The plant would be designed to conform to County of San Diego noise ordinance limitations as well as the California Energy Commission (CEC) guideline for the late-night noise increase increment. Because peaking power plants are designed to operate during peak hours of daytime electrical demand, operation at night time would be rare.

- **Traffic**. During the installation of the gas line, the southbound lane of SR76 would be closed to allow room for construction of the gas line. To reduce construction traffic impacts, the gas line would be installed in segments.

Transmission Interconnection. The Pala peaker project would require a 20-foot-wide easement obtained from SDG&E for a new transmission line between the proposed power plant and SDG&E's existing substation. Between the generation site and the existing Pala Substation boundary, the developer would construct, own, and operate a new 0.2-mile underground transmission line. Installation of the transmission line would require excavation of an approximately 2-foot-wide trench 5 to 6 feet deep. To reduce impacts to a drainage west of the project site, horizontal directional bore would be used instead of trenching. Either this option would be duplicated for underground construction across Pala Del Norte Road, or trenching would be limited to one side of the road at a time.

Pala Peaker Construction. Plant construction would occur over 6 months, with an average workforce of 70 construction workers, peaking at approximately 105 workers in the last month. Laydown, office trailers, and parking for plant construction would occur within the site boundaries and a contiguous, 8-acre area to the south. Portable office trailers would be provided for construction management. Construction materials and supplies would be delivered by truck via I-15 and SR76.

Construction would typically occur between 7 a.m. and 6 p.m. Monday through Friday. Additional construction may also occur on weekends or during nighttime hours, if needed, for critical work to advance the progress of the project to meet the required schedule.

Margarita Peaker

The Margarita peaking power plant would provide a maximum estimated peaking capacity of 99 MW. A smaller 44 MW project is currently proposed by Wellhead Power Margarita, LLC (Wellhead). The scope of the Margarita peaker project evaluated here would consist of a two simple cycle gas-fired turbines with a capacity of approximately 99 MW to be constructed on SDG&E-owned property at the Margarita Substation in Orange County. In June 2007, Wellhead submitted an application to Orange County to build the initial 44 MW project. Orange County should complete the environmental review of the 44 MW project in 2008.

Existing Margarita Substation. SDG&E's existing Margarita Substation is located in the 28400 block of Antonio Parkway in Ladera Ranch. The community of Ladera Ranch is located east of Interstate 5 between Mission Viejo and State Route 74 in Orange County. The substation is located on 3.0 acres of otherwise undeveloped land.

Margarita Peaker Location and Setting. The land adjacent to and east of the substation would be developed to accommodate the peaker project. This property is immediately surrounded by another concrete pad and undeveloped or agricultural land on the outskirts of Ladera Ranch. Residential land uses are immediately west across Antonio Parkway and to the north of the site, approximately 800 feet from the peaker location.

Margarita Peaker Major Components. Two simple-cycle combustion turbine generators and ancillary facilities would be installed adjacent to the Margarita Substation to provide approximately 99 MW. The available interconnection at the substation is to a 138 kV line. The CTGs would use advanced technology for efficiency and emissions control including an oxidation catalyst and SCR system compliant with South Coast Air Quality Management District requirements for new sources. The site would also include prefabricated cooling towers for inlet air chilling, a raw water tank, a wastewater storage tank, an aqueous ammonia storage tank, and linear facilities for natural gas, raw water, and wastewater.

Other Features of Margarita Peaker

- **Natural Gas Supply.** The nearest natural gas supply is approximately 1.5 miles away. To access this, an underground gas pipeline lateral with a 10-inch diameter would be constructed along Antonio Parkway.
- **Water Supply.** Cooling water would be delivered via a new pipeline from Antonio Parkway. Average water use would be approximately 100,000 gpd or up to 75 gpm. The backup supply of raw water would be stored on site in a 375,000-gallon water storage tank (approximately 40 feet diameter and 40 feet tall).
- **Wastewater Disposal.** Wastewater from the chiller system cooling tower blowdown and sanitary drains would be approximately 75,000 gpd or 50 gpm. Chiller blowdown as well as general drain wastewater would be routed to the wastewater storage tank for tanker truck removal and offsite processing and reuse.
- **Hazardous Materials.** The plant would be a small quantity generator for hazardous waste under 22 CCR Division 4.5. Accident prevention and risk management plans, hazard assessments, release prevention programs, emergency response plans, process management systems, and employee training would be implemented.
- **Visual Elements.** Exterior lighting would be downward-directed with photocells for control. Under normal operating conditions, lighting would only be used when required for maintenance or emergency repairs.
- **Noise Abatement.** The plant would be designed to conform to Orange County noise ordinance limitations.
- **Traffic**. Portions of Antonio Parkway and other local roads would be closed temporarily during construction of the gas line and water lines. These pipelines would be installed in segments to minimize the traffic disruption.

Margarita Peaker Construction. Approximately 6 months of construction activity would occur. The workforce would require approximately 8 acres of temporary laydown area, potentially across Antonio Parkway or adjacent to the development site. Approximately 100 workers would be involved at the peak construction phase, and on average 70 workers would need access to the site and linear facilities. Work would be confined to daytime hours in compliance with Orange County noise limitations.

Borrego Springs Peaker

A liquid-fuel fired peaking power plant with a capacity of approximately 15 MW would be developed immediately east of the existing Borrego Springs Substation. The winning bidder in SDG&E's 2008 RFO won the right to help SDG&E develop a generation facility in Borrego Springs (CPUC Data Request 28, dated May 6, 2008).

Existing Borrego Springs Substation. SDG&E's existing Borrego Springs Substation is located on Borrego Valley Road in Borrego Springs in northeastern San Diego County. The site is along Borrego Valley Road just north of Palm Canyon Drive. The existing substation occupies less than 2 acres.

Borrego Peaker Location and Setting. The Borrego peaker project site would be 2 acres of graded but undeveloped desert land adjacent to the substation. The nearest developed land uses are rural residences more than 1,200 feet away.

Borrego Peaker Components. One or more reciprocating internal combustion engines or stationary gas combustion turbine generators capable of achieving 15 MW output would be installed within a new enclosure adjacent to the substation. Emissions control would likely include selective catalytic reduction and an oxidation catalyst or a diesel particulate filter, as dictated by the San Diego Air Pollution Control District requirements for new sources. Because of limited natural gas supplies, the site has been identified by SDG&E as suitable only for biodiesel (e.g., B20 grade or 20% biodiesel mixed with 80% conventional diesel fuel). This would require on-site fuel storage and fire suppression. Raw water and aqueous ammonia storage would also be necessary. The nearest transmission interconnection would be a 12 kV line.

The building housing the engines would be less than 30 feet tall and fit on a concrete pad about 100 feet by 100 feet. The fuel storage tank would be no larger than 30 feet in diameter and height, and it would also require a concrete pad for containment. No additional lighting would be necessary, except during emergency maintenance. Other structural components within the 2-acre site would include a closed-loop radiator system and fans for air cooling the engine cooling water. This form of dry cooling would demand only very small quantities of water that could be occasionally delivered by truck. Truck deliveries of liquid fuel and ammonia for emissions control devices would also be occasionally necessary, depending on the frequency of operating the peaker.

Borrego Peaker Construction. Approximately 6 months of construction activity would occur. The workforce would require approximately 4 acres of temporary laydown area adjacent to the substation. Approximately 40 workers would be involved at the peak construction phase. Work would be confined to daytime hours in compliance with San Diego County noise limitations.

Miramar II Peaker

In its 2008 RFO application, SDG&E offered potential developers use of a site at the Miramar Energy Facility for a new peaking power facility. The maximum estimated peaking capacity of the site is 49 MW. The utility expects to issue a contract with an unnamed developer to design and build the plant (SDG&E's Application A.07-05-023, May 11, 2007).

Existing Miramar Energy Facility. SDG&E's existing Miramar Energy Facility is located at 5875 Consolidated Way in San Diego just north of the Miramar Marine Corps Air Station and south of Miramar Road. The Miramar site presently includes one combustion turbine rated at 47 MW located between commercial and light industrial buildings south of Consolidated Way.

Miramar II Peaker Location and Setting. The Miramar II peaker project site, located adjacent to the Miramar Energy Facility, is currently in a commercial and light industrial area. The available site is 1.5 acres and is graded and paved adjacent to a railroad spur. Industrial land uses surround the site, with the nearest multi-family residences or potentially sensitive land uses being more than 1,200 feet away, north of Miramar Road.

Miramar II Peaker Components. One 49 MW simple-cycle combustion turbine generator and ancillary facilities would be installed adjacent to the existing Miramar Energy Facility. The CTG would use advanced technology, including selective catalytic reduction and an oxidation catalyst, as dictated by the San Diego Air Pollution Control District requirements for new sources. Natural gas would be the exclusive fuel. Linear connections to existing natural gas and water supply lines within the adjacent industrial parcels would be less than 400 feet through the paved yard. Some raw water and aqueous

ammonia storage would be necessary. The CTG would be surrounded by the existing industrial buildings and the Miramar base, which would obstruct views.

Vehicle access from Consolidated Way would occur on existing paved driveways. Natural gas is available on site, and the site offers potential to interconnect to an existing 69 kV transmission line. A concrete storage pad of approximately 1,500 square feet would need to be demolished prior to installing the new peaker. The site is owned by SDG&E, and SDG&E maintains records of soils studies and previous uses on the site.

Miramar II Peaker Construction. Approximately 6 months of construction activity would occur. The workforce would require use of existing paved parking areas for temporary laydown. Approximately 80 workers would be involved at the peak construction phase, and on average 35 workers would need access to the site. Work would be confined to daytime hours in compliance with San Diego County noise limitations.

E.6.1.6 Non-Renewable Distributed Generation

The Non-Renewable distributed generation component of the All-Source generation alternative would involve the installation of small generation facilities at or near consumer sites such as hospitals and industrial facilities in sufficient number to provide 35 MW of reliable (firm On-Peak) capacity by 2016 (approximately 70 MW of nameplate capacity). The distributed generation (DG) component of this alternative would be in addition to distributed generation systems that would be installed even without the project. The new distributed generation resources could be located anywhere in the SDG&E service territory, but they would likely occur at existing facilities that have a need for cogeneration or combined heat and power. Individual DG projects are likely to vary in size and configuration as well as type.

Renewable energy can be used for distributed generation (solar PV and wind), but this is described separately under the New In-Area Renewable Generation Alternative in Section E.5 and Section E.6.1.~~6~~7.

Background

Distributed generation refers to small-scale power generation technologies (typically in the range of 3 kW to 10 MW) located close to where electricity is used (e.g., a business or home) to meet onsite power needs in place of (or in conjunction with) traditional grid-supplied power. This is in contrast to generation built to provide power to the grid. DG can be either renewable, such as solar photovoltaics, small wind turbines, and small bio-fueled generators, or it can be fossil-fueled, such as natural gas powered engines or fuel cells. This section focuses on Non-Renewable technologies that can be used for DG, because the New In-Area Renewable Generation Alternative (Section E.5) includes analysis of renewable energy facilities that are distributed.

Systems that provide useful heat as well as electric power, known as cogeneration or combined heat and power (CHP) are a common DG technology. DG systems may be owned by the incumbent utility, although the DG systems are more commonly owned by the host facility which utilizes the system's electric generation or a third party who enters into a contractual relationship with the host facility. Power generated by DG facilities is either consumed onsite or fed into the grid, and generators are compensated or reimbursed for any power delivered to the grid.

The primary program to promote DG in California is the statewide Self-Generation Incentive Program (SGIP). Pursuant to California Assembly Bill 970, the CPUC approved the SGIP on March 27, 2001 (D.01-03-073). SGIP provides financial incentives for customers who install up to 5.0 MW of qualifying distributed generation equipment onsite.[14] Qualifying equipment must be certified to operate in parallel with the electrical grid and be: solar PV, wind turbines, fuel cells (with either renewable or non-renewable fuel), micro-turbines (with either renewable or non-renewable fuel), or internal combustion engines and "large" gas turbines (with either renewable or non-renewable fuel). The internal combustion engines and "large" gas turbines must also meet AB 1685 emissions standards.

The San Diego Regional Energy Office (SDREO) is the local administrator of the SGIP. The program ran through December 31, 2007, although some extension or analogous program is likely to continue in 2008 and beyond.

This alternative would involve an expansion of Non-Renewable DG beyond that contemplated by SDG&E in the PEA Section 3.3.3.4, which anticipates a minimal increase in DG. As of mid-2006, SDG&E reports to have a total of 61 installed self-served load DG units totaling approximately 105 MW of nameplate capacity, with six pending DG projects for a total of approximately 5 MW.[15] SDG&E expects that with or without the Proposed Project, the use of DG in the San Diego area will grow by adding nameplate capacity of 11 MW in 2010 and 17 MW by 2016. Appendix 1 includes a discussion of the potential contribution of DG to SDG&E's service area considering existing regulatory incentives.

Components

Several non-renewable fuel source generation technologies are available for DG. Under this alternative, DG systems could employ any of them, and all would be installed in existing structures. Because of their dispersed nature and relatively small size, DG installation would not require an extensive work area, an extended time on site, or a large construction crew. Impacts would be limited to generation on an existing structure, although distributing energy locally depends on transmission reliability.

E.6.1.7 In-Area Renewable Components of All-Source Generation

As part of the New In-Area All-Source Generation Alternative, development of ~~all~~ some of the renewable resources described under the New In-Area Renewable Generation Alternative in Section E.5 would occur, except the solar thermal component. The various renewable power projects would involve solar PV, wind, and biomass/biogas as follows:

- ~~An overall nameplate potential of 300 MW of new solar thermal generating resources, or approximately 240 MW for reliability accounting purposes, would be developed near Borrego Springs by 2016~~
- Individual solar PV systems would be installed on residential and commercial buildings totaling up to a nameplate capacity of 210 MW or 105 MW for reliability accounting by 2010
- Approximately 200 MW of wind power nameplate capacity or 48 MW for reliability accounting would need to come on line by 2010~~, with 400 MW of nameplate capacity or 96 MW for reliability accounting by 2016~~, most likely in the Crestwood wind resource area

[14] Although incentive payments can be received for only the first 1 MW.

[15] SDG&E PEA page 3-41.

- Approximately 50 MW of new biomass/biogas generation by 2010~~, with 100 MW of biomass/biogas by 2016~~, from new landfill gas-to-energy projects or wood waste projects at unspecified locations.

Please see Section E.5 for the environmental impacts associated with new In-Area renewable generation.

E.6.1.8 All-Source Generation with Demand Response

One optional scenario, or "resource bundle," that could occur in conjunction with the New In-Area All-Source Generation Alternative would be to include 231 and 249 MW of demand response by 2010 and 2016, respectively. Demand response (DR) refers to any number of programs or utility rate schedules targeted at altering customers' usage patterns, usually to reduce load during hours of peak system demand in response to a financial incentive. Demand response programs usually, but not always, use altered pricing structures to induce the customer usage change, and although they shift the time of usage they do not necessarily reduce overall energy consumption. These demand response levels would be consistent with the CPUC's demand response goals and SDG&E's updated goals in its 2007-2016 Long-Term Procurement Plan filed in late 2006.[16] Including this level of demand response with this alternative would improve the likelihood of this alternative in meeting reliability objectives.

Expanding demand response in the SDG&E area would not have any environmental consequences.

E.6.1.9 All-Source Generation with Demand Response and RECs

A second optional scenario, or second "resource bundle," that could occur in conjunction with the New In-Area All-Source Generation Alternative would be to combine the All-Source generation alternative with demand response and the use of Renewable Energy Credits (RECs) for RPS compliance. This would allow SDG&E to avoid congestion costs associated with delivery of renewable energy generated outside of San Diego County. Implementing a RECs program as a part of this alternative should reduce the cost of meeting SDG&E's renewable goals, since the delivery of renewable energy into the SDG&E load center would not be necessary. With SDG&E using RECs for RPS compliance, the congestion costs associated with purchasing renewable power for San Diego County could be greatly reduced or eliminated.

Using RECs for RPS compliance in the SDG&E area would not have any environmental consequences.

[16] R.06-02-013, Volume 1, p. 189.

E.6.2 Biological Resources

Biological Resources for SBRP

Biological Resources Regulatory Setting for SBRP

The following regulations would apply to the South Bay Replacement Project. Other applicable regulations are addressed in Section D.2.

Rivers and Harbors Act of 1899. Section 10 of the Rivers and Harbors Act requires approval from the Secretary of War prior to the commencement of any work in or over navigable waters of the United States, or which affects the course, location, condition or capacity of such waters.

San Diego Unified Port District Act of 1962. The San Diego Unified Port District Act provided for the creation of the Port District and contained the provision that the Board of Port Commissioners draft a master plan for harbor and port improvements, and for the use of all tidelands and submerged lands, which are conveyed to the Port. The district also created the San Diego Bay Integrated Natural Resources Management Plan and established a draft Mitigation Policy for impacts to San Diego Bay's natural resources. Proposed improvements for the SBRP site are also addressed in the draft Chula Vista Bay Front Master Plan.[17]

California Coastal Act. Among the State laws applicable to the SBRP is the California Coastal Act, including provisions of Chapter 3 of the Coastal Act that may not be applicable to Port property Chapter 8 of the Coastal Act governs Port properties and contains both procedural and substantive requirements that are distinct from those generally applicable to non-Port properties. The SBRP site currently falls under the jurisdiction of the Chula Vista Local Coastal Program; this jurisdiction is expected to shift to the Port and its Port Master Plan in the near future (Lunstedt, 2006).

Habitat Conservation Plans. The project is located within two existing Federal Endangered Species Act (FESA) Section 10 Habitat Conservation Plan Areas: the San Diego Multiple Species Conservation Plan (MSCP) Subregional Plan; and the City of Chula Vista MSCP Subarea Plan. The City of Chula Vista describes these Plans as follows:

> *The Multiple Species Conservation Program (MSCP) is a comprehensive, long-term habitat conservation plan developed to address the needs of multiple species and the preservation of natural vegetation communities in southwestern San Diego County. The MSCP Subregional Plan, a 'framework' plan for the 12 participating jurisdictions, was adopted by the City of San Diego and County of San Diego in 1997. The MSCP Subregional Plan addresses the potential impacts of urban growth, natural habitat loss and species endangerment, and creates a plan to mitigate for the potential loss of 'covered species' and their habitat due to the direct, indirect and cumulative impacts of future development of both public and private lands within the MSCP's approximately 900-square-mile study area. The City of Chula Vista MSCP Subarea Plan is a policy document through which the MSCP Subregional Plan is implemented within the City's jurisdiction. The City's MSCP Subarea Plan provides a blueprint for habitat preservation and forms the basis for federal and state incidental 'take' permits for 86 plant and animal species within the city.*

[17] http://www.portofsandiego.org/projects/cvbmp/index.asp

However, the SBRP Site is located in a special management zone (e.g., under Port authority) and is therefore not eligible for inclusion under either MSCP (Lunstedt, 2006).

Biological Resources Environmental Setting for SBRP

Site Description. According to the Application for Certification (AFC), the 33-acre land parcel located south of the SBPP held tanks of LNG for operation of SBPP. Approximately 19.4 acres of this 33-acre parcel will be used for construction and operation of SBRP. This includes 12.9 acres for the SBRP plant footprint and 6.5 acres for the relocated SDG&E substation. The remaining 13.6 acres includes a planned Port 100-foot buffer between the SBRP site and western property fence-line that borders the salt ponds, and a 300-foot SDG&E easement in which various transmission towers owned by SDG&E are located along the eastern portion of the property.

The 33-acre former LNG site has been maintained as an industrial facility subject to modification by future redevelopment. The site contains cement foundations and compacted, relatively impervious base material that supports weedy, ruderal vegetation. Access roads and paths are still present and show signs of occasional use. The LNG tank farm was closed and mostly dismantled in 1989. Two large tank foundations and several cement building foundations are still present. The existing berm that surrounded the large tanks is also still present and contains a degraded asphalt cover along the rim that allows vegetation to grow through the cracks. As part of site preparation activities, the cement and asphalt will be removed in preparation for construction of SBRP and recycled and used to fill low/excavated areas on SBRP and/or the 115-acre parcel. The berm would be leveled and the entire area graded and the foundations of the former LNG tanks will be removed.

The land area primarily supports non-native annual grassland that surround the old LNG tank containment berm. A few small pond areas occur in the grassland south of the bermed area. These pond areas and the area inside the LNG containment berm hold water during unusually high precipitation years, which allow marginal wetland vegetation (primarily non-native) to grow.

There are no Significant Natural Areas or Designated Ecological Reserves within the SBRP disturbance area. However, the SBRP site is bordered on the west by the Chula Vista Wildlife Reserve and South San Diego Bay, and the South Bay Unit of the San Diego National Wildlife Refuge. The South Bay Unit of the San Diego Bay National Wildlife Refuge encompasses 3,940 acres, and habitats consist primarily of coastal salt marsh, tidal flats, and salt ponds.

Biological Surveys. For this EIR/EIS, the biological setting and survey information is summarized from the AFC. Biological resources evaluated for project impacts include vegetation communities, wetlands, wildlife, and wildlife habitats in all the temporary and permanent project impact locations. The surveyed areas include the 33-acre LNG site, the 115-acre site, and the general area 1.0 mile out from the site. All linear features (gas pipeline, water supply and discharge pipelines, electric transmission lines) are well within 1.0 mile of the site. The general project vicinity is dominated by industrial and commercial use, so survey efforts concentrated on “edge” areas where natural habitat may persist or where native species may persist. The field surveys were aided by aerial photographic interpretation, which helped identify land uses. The presence, or potential presence, of sensitive biological resources was determined from information gathered during field surveys conducted for the project, published and unpublished literature, and natural resource agency databases.

General habitat and wildlife field surveys were performed by CH2M HILL biologists November 29, 2005, and February 14-16, 2006. Wildlife surveys included evening periods to observe nocturnal

animals. Results of wildlife surveys include observations of scat, tracks, and other sign. A focused special-status species survey was conducted by CH2M HILL biologists on May 18, 2006 for special-status species, including nesting peregrine falcon, Belding's savannah sparrow, and other nesting birds that occur only seasonally in the area. Botanical surveys were performed by botanist Fred Roberts on February 15 and May 26, 2006 during blooming periods for rare species. Previous studies and portions of information from the following documents were used as references for additional occurrences of species at the site:

- Duke Engineering & Services. 2001. Environmental Assessment Report for the Port of San Diego Former Liquefied Natural Gas Facility, Chula Vista, California. Appendix A: Biological Assessment of Proposed Core Sampling Sites. Prepared for Duke Energy South Bay, LLC. Prepared by Duke Engineering & Services, Sacramento, California.
- URS. 2005. Biology Technical Report for the Duke South Bay Energy Facility Project, Final Report. Prepared for Duke Energy, South Bay LLP, Chula Vista, CA. Prepared by URS, San Diego, CA.
- San Diego Bay National Wildlife Refuge Sweetwater Marsh and South San Diego Bay Units, Draft Comprehensive Conservation Plan and Environmental Impact Statement, July 2005.
- U.S. Department of the Navy, Southwest Division (USDON, SWDIV). 1999. San Diego Bay Integrated Natural Resources Management Plan, and San Diego Unified Port District Draft. September 1999. San Diego, CA. Prepared by Tierra Data Systems, Escondido, CA.

Habitat Types and Species Supported

The following sections summarize information from the South Bay Replacement Project AFC and describe all habitat types and vegetation and wildlife species that could be affected by SBRP (SBRP, 2006). Habitat types that would be affected during construction activities in the SBRP area consist of primarily ruderal habitat with areas of annual grassland, baccharis scrub, landscape, and drainage features. ~~Table 8.2-2 (presented in Appendix 8L to this EIR/EIS) presents a list of plant species observed on the site during botanical surveys. Table 8.2-3 (presented in Appendix 8L to this EIR/EIS) presents a list of wildlife species observed on the site during onsite field surveys.~~

Ruderal Habitat. The dominant habitat type on the 115-acre SBPP site is ruderal, consisting of bare or disturbed ground with weedy or non-native plant species. Typical species in this habitat on site include tumbleweed, telegraph weed, mustard, and non-native atriplex species. This area is periodically maintained to control vegetation overgrowth, primarily with spot weed killer. The Port recently manually removed excessive overgrowth of vegetation around the cement foundations in the 33-acre area. Most of the property has had disturbance from past development and maintenance activities and does not provide suitable habitat for special-status plants or wildlife; however, ground nesters such as horned lark (*Eremophila alpestris*) and killdeer (*Charadrius vociferous*)may nest in ruderal areas, in particular, north of Telegraph Canyon Creek where sparse vegetation still exists.

Urbanized and Landscape Communities. Several landscape berms were established on the SBPP and within the 300-foot transmission line easement east of the proposed SBRP sites. These berms are approximately 6 to 7 feet high and 20 feet wide. They support mature landscape trees and shrubs such as California fan palm, eucalyptus, Brazilian pepper, natal plum, and sand spurry. The vegetation is used by nesting songbirds such as Anna's hummingbirds (*Calypte anna*), mourning dove (Zenaida macroura), house finch (*Carpodacus mexicanus*), and savannah sparrows (*Passerculus sandwichensis*).

There are residences and industrial, commercial, and urban uses within 1.0 mile east of the project site in the City of Chula Vista. Houses, streets, and parking lots tend to be planted with garden plants (e.g., prickly pear, azalea, oleander, bottlebrush, rose, palm trees, eucalyptus, and other ornamental species). The availability of water, shady cover, and insects makes the yards and landscaping around urban areas attractive to certain adaptable species, but these tend not to include many native or sensitive species. Dominant wildlife in these areas include common species (e.g., house sparrow (*Passer domesticus*), house finch, Northern mockingbird (*Mimus polyglottos*), western meadowlark (*Sturnella neglecta*), mourning dove, American crow (*Corvus brachyrhvnchos*), and American robin (*Turdus migratorius*). Mammal species attracted to landscape and human residences include raccoon (*Procyon lotor*) opossum (*Didelphis virginiana*), house mice (*Mus musculus*), Norway rats (*Rattus norvegicus*), California ground squirrels (*Spermophilus beechyi*), as well as domestic or feral cats (*Felis sylvestris catus)* and dogs (*Canis familiaris*). These species tend to be those that are highly adaptable, widespread, and common. Landscape and urban habitats dominate the area east of the project site.

Annual Grassland Community. Disturbed grasslands at the SBRP site are dominated by nonnative annual grass species such as foxtail chess (*Bromus madritensis rubens*), soft chess (*B. hordaceus*), ripgut grass (*B. diandrus*), and slender wild oat (*Avena barbata*). Other common plants include the nonnative hottentot-fig, Australian saltbush (*Atriplex semibaccata*), white-stemmed filaree (*Erodium cicutarium*), bull thistle (*Cirsium vulgare*), telegraph weed, wild lettuce (*Lactuca seriola*), and bush mallow (*Malacothamnus fascicularis*). A few small, shallow depressions in the grassland are dominated by non-native species such as ryegrass (*Lolium perenne*), grass poly (*Lythrum hyssopifolium*), red-stemmed fileree (*Erodium cicutarium*), yellow sweet clover (*Melilotus indicus*), and Bermuda grass (*Cynodon dactylon*).

Wildlife observed in the annual grasslands include Western fence lizard (*Sceloporus occidentalis*), gopher snake (*Pituophis melanoleucus*), black-tailed hare (*Lepus californicus*), California ground squirrel, coyote (*Canis latrans*) (scat), savannah sparrow, Western meadowlark, and mourning dove.

Baccharis Scrub Community. Baccharis scrub vegetation occurs in the southern portion of the site and mixed in with riparian species at the mouth of Telegraph Canyon Creek. The baccharis scrub vegetation found along the LNG containment berm is not a true representation of the habitat as it is not natural, but has some of the typical species, such as coyote bush (*Baccharis pilularis*), mulefat (*Baccharis salicifolia*), and broom baccharis (*Baccharis sarothroides*). Additional species include yellow sweet clover, Brazilian pepper, bull thistle, wild lettuce, summer mustard, tree tobacco (*Nicotiana glauca*), and coast goldenbush (*Isocoma menziesii* var. *vernonoides*). This habitat has been growing since the removal of the LNG tanks in 1989. Periodic maintenance of the area does not seem to include the berm as dense vegetation persists.

Wildlife observed in the LNG containment berm habitat include Anna's hummingbird, savannah sparrow, desert cottontail (*Sylvilagus audubonii*), opossum, blue-grey gnatcatcher (*Polioptila caerulea*), and foraging Cooper's hawk (*Accipiter cooperii*). Small mammal burrows and a coyote den was observed in the berm. Soils at the entrances to the burrows contain marine snail and bivalve shells, indicating the berm contains dredge materials from the Bay.

Marine and Inter-Tidal Zone Communities. The marine environment of south San Diego Bay consists of open water (sub-tidal), softbottom subtidal and intertidal areas, mud flats, tidal salt marshes, and salt ponds. Salt marsh vegetation is present along the coastal, northwest edge of the existing power plant area, surrounding the Chula Vista Wildlife Reserve, and the canals of the Salt Ponds). Coastal salt marsh bordering the SBRP site supports saltwort (*Batis maritime*), woody pickleweed (*Salicornia virginica*); estuary seablight (*Suaeda esteroa*); woolly seablight (*Suaeda taxifolia*); and cordgrass

(*Spartina foliosa*). Salt marsh habitat provides excellent nesting, feeding, and escape habitat for a variety of species, including Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) and light-footed clapper rail (*Rallus longirostris levipes*) (USFWS, 1998).

Eel grass (*Zostera marina*) beds are a submerged plant community that fringes the entire south San Diego Bay intertidal zone (USFWS, 1998). Eel grass beds provide food and cover for many species of invertebrates and fish, which in turn, provide a food base for many bird species such as the least tern. Pacific green sea turtles, which are herbivorous, also feed on eel grass. Mudflats typically have anaerobic sediments that do not support vegetation but are a crucial link in the marine food chain and provide habitat for invertebrates and microorganisms that shorebirds feed on.

Hardshore habitat, created by depositing fill (e.g., riprap) and dredged material, is abundant but not natural to the San Diego Bay (U.S. Navy and SDUPD, 1999). Hardshore habitat is found along the Chula Vista Wildlife Reserve, salt pond margins, mouth of Telegraph Canyon Creek, and SBPP water intake/effluent channels. These dikes were originally created to stop the cool intake water from mixing with the heated effluent. Hardshore habitats provide nesting, resting, and foraging habitat for many birds and other wildlife. California least terns and other birds are known to nest on this landscape feature within the salt ponds and Reserve. California brown pelican, great blue heron (*Ardea herodias*), snowy egret (*Egretta thula*), and common egret (*Ardea alba*) were observed roosting and/or foraging from the dikes.

The region commercially used by the Western Salt Company/South Bay Salt Works was once the largest expanse of tidal salt marsh in south San Diego Bay. It has been incorporated into the South Bay Unit of the San Diego Bay NWR. The San Diego Bay Integrated Natural Resources Management Plan describes the habitat function of the Salt Works:

> *The Salt Works cover approximately 1,451 acres (587 ha), producing sodium chloride and magnesium chloride for industrial use. Primary ponds are approximately 3 ft (1 m) deep at their center, and are the least salty, representing the first stage of the extraction process. Secondary ponds are up to 5 ft (2 m) deep. These ponds are slightly more saline than sea water and are used for commercial brine shrimp production. Pickling ponds have the second-highest salinities. The final step in the extraction process occurs in crystallizer ponds, which support the highest salinity levels. The evaporation process takes 12 to 18 months, depending on rainfall, with each crystallization pond harvested once per year. Brine shrimp thrive in the secondary system; shrimp eggs hatch beginning in mid-May and mature shrimp are collected through mid-December. These are harvested commercially. Most birds use the southern side of these secondary ponds. Salinity in the salt ponds contributes to an abundance of brine flies, an important food for many birds.*
>
> *The dikes and ponds provide an escape area from rising tides, as well as feeding and resting areas for shorebirds and waterfowl. Different bird species preferentially select different areas of levees by the amount or proximity of vegetation or bare ground, or some other unknown factor about the substrate …. Gulls, terns, black skimmers, and pelicans, including the California brown pelican, use the dikes for evening roosts. Dikes separating the ponds support significant nesting colonies of western snowy plover, Belding's savannah sparrow, black-necked stilt, black skimmer, and Caspian, Forster's, gull-billed, royal, and California least terns. (U.S. Department of the Navy and San Diego Unified Port District, 1999).*

Riparian Habitat. Non-native riparian habitat occurs at the mouth of Telegraph Canyon Creek. The banks of the creek are primarily fill material. California fan palm, myoporum, Brazilian pepper, atriplex species, and baccharis species dominate the riparian area. The estuary seablite is found in the tidal mudflats at the base of the rip rap portion of the creek.

Riparian vegetation established on the banks of Telegraph Canyon Creek provide shelter for migratory songbirds during migration and nesting birds such as savannah sparrow, red-winged blackbirds (*Agelaius phoeniceus*), Anna's hummingbird, and black phoebe (*Sayornis nigricans*). This habitat also supports small mammals such as house mouse, Norway rat, California ground squirrel, and desert cottontail, which in turn provide prey for other wildlife. Surveys included observations or evidence of gopher snake (skin), coyote (scat), raccoon (tracks), opossum (skeleton), red-tailed hawk (*Buteo jamaicensis*), and Cooper's hawk using the habitat for forage.

Water Resources, Drainages, and Potential Wetlands. None of the water features currently on the site are in a natural, undisturbed state. Portions of the combined 115-acre and 33-acre sites were elevated with soil dredged from the South Bay during construction of the power plant in the late 1950s. The natural drainages that flow into San Diego Bay in the vicinity of the project site (e.g., Telegraph Canyon Creek, Otay River, Sweetwater Creek, and Channel Creek) have been severely reduced and channelized by urbanization and water diversions and little freshwater discharges into the Bay (U.S. Department of the Navy and San Diego Unified Port District, 1999). These creeks drain stormwater from residential and commercial developments east of the site to the Bay. Freshwater wetland and riparian habitats still occur in these drainages where concrete does not dominate, primarily at the mouths of the drainages where they meet the Bay. Riverine wetland vegetation consists primarily of cattails, rushes, and reeds.

Only Telegraph Canyon Creek flows through the SBPP site. Telegraph Canyon Creek is cement-lined through most of the site with hard shore rip rap at the mouth entering into the South Bay. Sediments from stormwater discharges upstream collect at the eastern section of the creek where it enters the site. This sediment area supports sparse wetland vegetation such as cattails (*Typha* sp.), fennel (*Foeniculum vulgare*), castor bean (*Ricinus communis*), and small willows (*Salix* sp.), which are suitable for limited wildlife use. Black phoebe and redwinged blackbirds were observed using the vegetation as forage and shelter and could potentially use the area as nest sites (until the creek is cleared during maintenance). The mouth of the creek supports coastal salt marsh habitat at water levels and riparian vegetation along the rip rap banks. The estuary seablite was observed in this area during surveys. Wildlife that use the lined portion of the drainage include shore birds, song birds, raccoon, opossum, and coyote that feed on aquatic insects, crustaceans, and/or small mosquito fish. Dabbling ducks, such as teals (*Anas spp.*), northern shoveler (*Anas clypeata*), American wigeon (*Anas americana*), gadwall (*Anas strepera*), northern pintail (*Anas acuta*), and mallard (*Anas platyrhynchos*), are found primarily in shallow brackish water near the mouth of the drainage (U.S. Department of the Navy and San Diego Unified Port District, 1999).

Telegraph Canyon Creek most likely falls under the jurisdiction of the USACE, since it drains the watershed upstream and is connected to navigable waters (San Diego Bay). The Telegraph Canyon Creek channel and the bridge that crosses the creek would remain in place and not be affected by construction. The proposed metered gas pipeline providing fuel gas to SBRP will be constructed by SDG&E. Depending on the construction technique used by SDG&E, a Section 404 Nationwide Permit 12 may be required by the USACE, and a 401 water quality certification from the CRWQCB.

The channelized Channel Creek flows between the northern site boundary and the Marina Park into the J Street Marsh northwest of the site. This creek is similar in structure and habitats to Telegraph Canyon

Creek. It is cement-lined at the eastern end and tidally influenced at the mouth with salt marsh pickleweed habitat lining the banks. Wildlife observed using this area includes great-blue heron, common egret, American coot (*Fulica Americana*), mallard, and striped skunk (*Mephitis mephitis*). All construction activities will occur within the existing fenceline surrounding the SBPP and SBRP sites and no direct or indirect impacts would occur to Channel Creek.

Several man-made drainages occur on the SBPP and SBRP sites that collect and convey stormwater to the Bay. The stormwater drainages were excavated in non-native upland soils (lack hydric characteristics), lack vegetation (no hydrophytic vegetation), and are maintained solely for stormwater runoff (i.e., no significant natural hydrology). The stormwater drainages are lined with degraded, fractured asphalt and/or cement and do not have an ordinary high water mark (OHWM). There is no natural hydrologic connection to San Diego Bay or waters of the U.S. or State, as they flow to storm drains and a stormwater collection system on site. These drains eventually flow to the Bay through the circulating water discharge channel. The drainages will be replaced and/or modified during construction of SBRP to convey stormwater from SBRP to the Bay. No special-status plant or animal species were observed or are known or expected to inhabit the stormwater drainages in the project impact areas.

Several man-made, industrial features (primarily the old tank farms) were constructed for SBPP and the LNG tanks, pond water during high precipitation years. Some of the features hold pond water long enough to promote wetland vegetation in some years. Categories of wetland vegetation include: (1) obligate wetland plants (OBL) that almost always occur in wetlands; (2) facultative wetland plants (FACW) that occur in wetlands, but occasionally occur in non-wetlands; (3) facultative plants (FAC) that are equally likely to occur in wetlands or non-wetlands; (4) facultative upland plants (FACU) that usually occur in non-wetlands, but occasionally are found in wetlands; and (5) obligate upland plants (UPL) that almost always occur in non-wetlands. Non-indicator (NI) status are upland species. During field investigations, the percentage of wetland species was determined based on the ratio of wetland indicator species present to the total number of species present. More than 50 percent of the dominant (at least 20 percent cover) plant species must be FAC, FACW, or OBL to meet the wetland vegetation criterion. The bermed containment area was left abandoned and minimally maintained since removal of the tanks in 1989, which has allowed vegetation to colonize inside the berm. Although water is not present in the berm most years, non-native tamarisk (*Tamarix ramosissima*) and native sea purslane (*Sesuvium verrucosum)* have colonized a low lying portion of the bermed area. Sea purslane (OBL) is a wetland indicator plant and tamarisk (FAC) is a marginal wetland indicator plant, suggesting the area is developing marginal wetland characteristics. However, the soils are primarily hard packed, sandy fill (often with marine snail shells) that does not show wetland indicators. This bermed area holds water only during high precipitation years (the LNG bermed areas do not flow off site, it just ponds). The containment area is an industrial facility constructed in upland soil, does not have an OHWM, and most likely does not fall under the jurisdiction of the USACE.

SBPP tank farm bermed areas are regularly drained after major storm events. Since SDG&E demolished the LNG site, it's likely that the berm area has never been pumped (it will not drain). Average rainfall for the area is approximately 10 inches. Rainfall from 1999 through 2003 averaged 6.8 inches. The 2004-2005 wet season rainfall was extraordinarily high with approximately 22 inches. This level of annual rainfall has only been exceeded during two other years: 24 inches in 1940-1941 and 25 inches in the winter of 1893-1894. A preliminary estimate of 2005-2006 rainfall from September 2005 through May 2006 is approximately 5.4 inches (CDWR, 2006). Although standing water was observed during extremely high rainfall in 2004-2005 (URS, 2005), little was observed during surveys in November 2005 and only for a short period.

Visual Resources for SDCPP

Visual Resources Setting for SDCPP

The SDCPP site would be located amongst hills within the southeastern boundary of the MCAS Miramar Station. Vegetation in the immediate power plant vicinity consists primarily of native grasslands and coastal sage scrub. There are no residential, commercial, or agricultural land uses immediately adjacent to the site, but the City of Santee has approved the development of ~~expects to develop~~ 1,380 homes on land east of the SDCPP site (the Fanita Ranch development). Also, the site is highly visible from residences at the north end of Strathmore Drive to the east of the site and a camping area at the north end of Santee Lakes to the immediate south of the site. One key viewpoint (No. 74) was selected for detailed evaluation of the SDCPP/ENPEX site (see Figure E.6.3-4A). Key Viewpoint 74 was established at the north end of Strathmore Drive in the vicinity of existing residences. The view is to the west. Figure E.6.1-3 shows the location of KVP-74.

Visual Quality. Moderate. The landscape visible from KVP 74 includes foreground grass- and shrub-covered rolling hills and a shallow valley that are visually non-descript. A constructed pond at the north end of Santee Lakes is a prominent feature as are the two transmission line corridors that border the site to the west and south (just beyond the field of view presented in Figure E.6.3-4A). Aside from these built features, the majority of the landscape is natural in appearance.

Viewer Concern. High. Residents along Strathmore Drive and visitors to the north end of Santee Lake are afforded expansive views of the predominantly undeveloped hills in the eastern portion of MCAS Miramar. Although there are two transmission line corridors that partially obstruct the view to the west, the landscape is substantially natural in appearance. Any addition of developed industrial features and industrial character to the landscape or blockage of views to higher quality landscape features (hills and ridges and sky) would be perceived as an adverse visual change in the landscape.

Viewer Exposure. Moderate-to-high. The power plant site has high foreground visibility from Residences along Strathmore Drive and the camping area at the north end of Santee Lakes. Views of the site are open and unobstructed. Although the number of viewers would be low, the duration of view would be extended. Combining these four equally weighted factors gives an overall moderate-to-high viewer exposure.

Overall Visual Sensitivity. Moderate-to-high. For residents along Strathmore Drive, combining the equally weighted moderate visual quality, high viewer concern, and moderate-to-high viewer exposure results in an overall moderate-to-high visual sensitivity of the visual setting and viewing characteristics.

Visual Resources Construction Impacts for SDCPP

Impact V-1: Short-term visibility of construction activities, equipment, and night lighting (Class II)

Power plant and linear facility construction would impact visual resources as a result of the presence and visual intrusion of construction activities, vehicles, equipment, materials, work force and night lighting at the power plant site and construction staging areas. Visual impacts would primarily affect views from residences on Strathmore Road and views from the camping area at the north end of Santee Lakes. While the majority of the construction activities would occur during daylight hours, some construction activities could potentially occur during nighttime hours. The adverse impact of SDCPP con-

struction would persist at the power plant site for two years. This impact would be similar to that described for SBRP and would require similar mitigation measures to ensure it is reduced to a less than significant level (Class II).

Available mitigation would include mitigation measures that are recommended for the Proposed Project. With an additional measure to take advantage of the terrain surrounding SDCPP, the construction-phase impacts to visual resources would be less than significant (Class II).

Mitigation Measures for Impact V-1: Short-term visibility of construction activities, equipment, and night lighting (Class II)

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

V-1d **Screen the power plant construction areas.** The project site, including the staging area and material storage areas, shall be screened from public views using the existing topography and landforms to the extent feasible.

Impact V-2: Long-term visibility of land scars and vegetation clearance in arid and semi-arid landscapes (Class II)

The SDCPP site would be developed in a semi-arid landscape with temporary staging areas and construction yards, new access and spur roads, and new linear facilities (e.g., natural gas and water supply pipelines). The land scars from construction activities can be long-lasting and would introduce adverse visual change and contrast by causing unnatural vegetative lines and soil color contrast from newly exposed soils. Mitigation measures similar to those recommended for the Proposed Project would be necessary to reduce this impact to less than significant levels (Class II).

Mitigation Measures for Impact V-2: Long-term visibility of land scars and vegetation clearance in arid and semi-arid landscapes

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars on non-Forest lands.**

V-2e **Minimize vegetation removal.**

G-1b **Implement erosion control procedures.** [APM GEO-2]

~~**V-2f** **Restrict vehicle travel and restore land.**~~

Visual Resources Operational Impacts for SDCPP

Impact V-NW12: Increased structure contrast, industrial character, view blockage, and skylining (Class I)

Figure D.6.3-4A presents the existing view to the west from Key Viewpoint 74 at the north end of Strathmore Drive, east o f the SDCPP site and adjacent to existing residences. Figure E.6.3-4B presents a visual simulation that depicts the SDCPP combined cycle power plant. SDCPP would introduce large structures with industrial character to an undeveloped 60-acre parcel bordered by vegetation and wildlife habitat. The most prominent structures of the SDCPP would be the 100-foot tall cooling towers and the 150-foot tall power plant (HRSG) stacks. Additionally, the SDCPP would include new 230 kV transmission lines leaving the site in a southerly direction (for about 0.5 to 1.0 miles) to connect into the existing 230 kV lines that run towards the Sycamore Canyon Substation and a

Figure E.6.3-4A. Key Viewpoint 74 – SDCPP: Strathmore Drive – Existing View
CLICK HERE TO VIEW

Figure E.6.3-4B. Key Viewpoint 74 – SDCPP: Strathmore Drive – Visual Simulation
CLICK HERE TO VIEW

new 30-foot asphalt ROW and a 20-foot asphalt perimeter road. The most obvious change to the landscape would be the industrial character of the SDCPP. Visible plumes from the cooling tower would occur, generally to the south. The resulting visual contrast would be high and the power plant and cooling tower would appear co-dominant compared to the surrounding landforms. View blockage of the background hills would be moderate-to-high. The overall visual change would be moderate-to-high when the three equally weighted factors of visual contrast, project dominance, and view blockage are combined. In the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be significant (Class I). Although there is no mitigation available to reduce the visual impact to a level that would be less than significant, mitigation measures V-3a, V-NW9a, V-NW9b, V-NW12a, and V-NW12b are recommended to reduce the visual impacts of the SDCPP facility to the extent possible. This viewpoint analysis is considered representative of nearby views of the SDCPP facility from Strathmore Drive and the camping area north of Santee Lake.

V-3a **Reduce visual contrast of towers and conductors.**

V-NW9a **Develop and implement architectural treatment for the power plant.**

V-NW9b **Develop and implement a Landscape Concept Plan.**

V-NW12a **Site the power plant to take advantage of topography for screening.** The power plant infrastructure shall be arranged on the site in such a way as to make maximum use of the visual screening afforded by site topography. Specifically, the power plant and cooling towers will be located in the western portion of Site 1B/1C.

V-NW12b **Reduce visual plumes from power plant.** The power plant shall be operated to minimize visible plumes according to the following plume abatement standards: no plume of any height shall be visible above the top of a HRSG stack at any time; no visible plume from the evaporative cooling tower shall extend more that 20 feet above the top of the cooling tower at any time; and no plume from the evaporative cooling tower shall be visible for more than a 10 percent frequency during seasonal daylight no rain/no fog hours. Seasonal is defined as the six consecutive months per year when the potential for plume formation is greatest. The months considered for a particular project are determined by the meteorological data used for that project and are usually November through April (CEC, 2003). ~~1.0 hour during any 24 hour period.~~

Visual Resources for Peakers

Visual Resources Setting for Peakers

Miramar Substation

The Miramar Peaker site would be located at 5875 Consolidated Way in San Diego just north of the Miramar Marine Corps Air Station and south of Miramar Road. The Miramar site is presently developed with one combustion turbine. One key viewpoint (No. 75) was selected for detailed evaluation of the Miramar Peaker site. Figure E.6.1-4a shows the location of KVP-75 and Figure E.6.3-5A shows the existing view. This viewpoint was selected because it is one of the few locations from which the peaker would be visible. Key Viewpoint 75 was established on the north side of Miramar Road directly across from the peaker site. The view is to the south.

Visual Quality. Low-to moderate. The landscape visible from KVP 75 includes a foreground urban commercial and industrial landscape with prominent transportation infrastructure. Roadside buildings constrain views down the road corridor and encompass few natural landscape features. Visual interest and variety are minimal.

Viewer Concern. Moderate. Travelers on this section of Miramar Road anticipate the complex commercial and industrial landscape. Therefore, viewer concern or sensitivity to the addition of developed industrial features to the landscape will depend on the prominence of the change and the extent to which such change is noticeable or blocks views to higher quality landscape features (sky).

Viewer Exposure. Moderate. The peaker site has low-to-moderate foreground visibility behind existing commercial buildings that border the south side of Miramar Road. As a result, only the upper portions of the peaker would be visible from Miramar Road and then primarily from a stationary position (such as KVP 75) viewing directly at the site. Although the number of viewers would be moderate-to-high, the duration of view would only be brief as most travelers on Miramar Road would have only a brief glimpse of the power plant and then only if they happen to view in that direction (approximately 90^{o} south of the direction of travel and outside of the primary cone of vision of both eastbound and westbound travel directions. Combining these four equally weighted factors gives an overall moderate viewer exposure.

Overall Visual Sensitivity. Moderate. For travelers on Miramar Road, combining the equally weighted low-to-moderate visual quality and moderate viewer concern and viewer exposure results in an overall moderate visual sensitivity of the visual setting and viewing characteristics.

Pala Substation

The Pala site would be located in the 10300 block of Pala Road (State Route 76) in Pala, which is located in northern San Diego County. The existing Pala Substation is located on 15 acres of mildly sloping land. A portion of the site proposed for development includes an existing orchard and a fenced in area with a few small structures. Depending on the development of the peaker power plant, some or all of the structures may need to be demolished. One key viewpoint (No. 76) was selected for detailed evaluation of the peaker site. Figure E.6.1-4b shows its location and Figure E.6.3-6A shows the existing view. Key Viewpoint 76 was established on eastbound SR76, across from the peaker site. The view is to the north.

Visual Quality. Moderate. The landscape visible from KVP 76 includes foreground grass- and orchard-covered flats backdropped by relatively non-descript, foreground to middleground rolling to angular grass- and shrub-covered hills and ridges. There are several visible utility lines and Pala Substation is just out of the field of view shown in Figure E.6.3-6A. Also, SR76 is a prominent linear feature in the landscape. However, as shown in the photograph, the terrain north of the highway is predominantly natural in appearance.

Viewer Concern. Moderate-to-high. Travelers on this section of SR76 are afforded open, unobstructed views of the adjacent flats and hillsides that are primarily natural in appearance. Any addition of developed industrial features to the landscape or blockage of views to higher quality landscape features (hills and ridges) would be perceived as an adverse visual change in the landscape.

Viewer Exposure. Moderate-to-high. The peaker site has high foreground visibility immediately north of SR76. Views of the site are open and unobstructed. Although the number of viewers would be moderate to high, the duration of view would be brief to moderate due to the relatively high travel speeds along this stretch of SR76. Combining these four equally weighted factors gives an overall moderate-to-high viewer exposure.

Overall Visual Sensitivity. Moderate-to-high. For travelers on SR76, combining the equally weighted moderate visual quality and moderate-to-high viewer concern and viewer exposure results in an overall moderate-to-high visual sensitivity of the visual setting and viewing characteristics.

Margarita Substation

The Margarita site would be located in the 28400 block of Antonio Parkway in Ladera Ranch. The community of Ladera Ranch is located east of Interstate 5 between Mission Viejo and State Route 74 in Orange County. The substation is located on 3.0 acres of undeveloped land. The Antonio Parkway, Cowcamp Road, and the Ortega Highway are all designated to be a "landscape corridor" by the Orange County General Plan. A landscape corridor traverses developed or developing areas and has been designated for special treatment to provide a pleasant driving environment as well as community enhancement. One key viewpoint (No. 77) was selected for detailed evaluation of the peaker site. Figure E.6.1-4c shows its location and Figure E.6.3-7A shows the existing view. Key Viewpoint 77 was established at Founders Park off of Avendale Boulevard, west of Antonio Parkway and the peaker site. The view is to the southeast.

Visual Quality. Moderate. The view from KVP 77 encompasses a foreground suburban landscape comprised of newer single-family and multi-family residences and landscaped park grounds, backdropped by relatively non-descript, but predominantly natural appearing rolling, grass-covered hills. While there are two noticeable utility lines along the ridge, and the small Margarita Substation is partially visible (only the upper portions of the A-frame takeoff structures are visible), there is relatively minimal industrial character apparent in the landscape.

Viewer Concern. High. Local residents and visitors to Founders Park expect open, unobstructed views to the relatively undeveloped, natural appearing hillsides east of Ladera Ranch. Any addition of developed industrial character to the landscape or blockage of views to higher quality landscape features (hills and sky) would be perceived as an adverse visual change in the landscape.

Viewer Exposure. Moderate-to-high. The peaker site has moderate foreground visibility and is partially screened by the western edge of the ridge and the existing Margarita Substation. The number of viewers would be moderate and the duration of view would be extended. Combining these four equally weighted factors gives an overall moderate-to-high viewer exposure.

Overall Visual Sensitivity. Moderate-to-high. For local residents and visitors to Founders Park, combining the equally weighted moderate visual quality, high viewer concern, and moderate-to-high viewer exposure results in an overall moderate-to-high visual sensitivity of the visual setting and viewing characteristics.

Borrego Springs Substation

The Borrego Springs site would be located on Borrego Valley Road in Borrego Springs in northeastern San Diego County. The site is along Borrego Valley Road just north of Palm Canyon Drive. The substation site includes 2 acres of graded but undeveloped desert land immediately east of the existing Borrego Springs Substation. One key viewpoint (No. 78) was selected for detailed evaluation of the peaker site. Figure E.6.1-4d shows its location and Figure E.6.3-8A shows the existing view. Key Viewpoint 78 was established on northbound Borrego Valley Road, just north of Palm Canyon Drive. The view is to the northeast.

Visual Quality. Moderate-to-high. The view from KVP 78 encompasses a foreground flat, desert valley floor supporting short-grass and shrub vegetation. A background comprised of the rounded to angular form of Coyote Mountain and the more distant irregular, horizontal form of the Santa Rosa Mountains are features of added visual interest. Although the Borrego Springs Substation is visible in the foreground, the landscape is predominantly natural in appearance.

Viewer Concern. High. Local residents and travelers in this portion of the valley are afforded panoramic views of a rugged, desert valley landscape that is predominantly intact with reasonably strong landscape coherence. Views of the background mountains and ridges are, for the most part, unobstructed. Any addition of developed industrial features to the landscape or blockage of views to higher quality landscape features (rugged ridges and mountains) would be perceived as an adverse visual change in the landscape.

Viewer Exposure. Moderate-to-high. The peaker site has high foreground visibility with no intervening screening vegetation or terrain. The number of viewers would be low-to-moderate and the duration of view would be extended. Combining these four equally weighted factors gives an overall moderate-to-high viewer exposure.

Overall Visual Sensitivity. Moderate-to-high. For local residents and travelers on Borrego Valley Road and Palm Canyon Drive in the immediate vicinity, combining the equally weighted moderate-to-high visual quality and high viewer concern, and viewer exposure results in an overall moderate-to-high visual sensitivity of the visual setting and viewing characteristics.

Visual Resources Construction Impacts for Peakers

Impact V-1: Short-term visibility of construction activities, equipment, and night lighting (Class II)

Construction impacts on visual resources would result from the presence and visual intrusion of construction vehicles, equipment, materials, and work force at the power plant sites. Construction impacts on visual resources would also result from the temporary use of night lighting if night lighting is not appropriately controlled at the construction sites. Construction equipment and activities would be seen by various viewers in close proximity to the construction sites including nearby residents, outdoor recreation enthusiasts, and travelers on public roads. Construction impacts at these sites could last approximately three to four months. During this relatively short time period the resulting visual impacts would be significant but mitigable (Class II). Mitigation Measures V-1a through V-1c are required to reduce the impacts to levels that would be less than significant.

Mitigation Measures for Impact V-1: Short-term visibility of construction activities, equipment, and night lighting

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

V-~~1c~~1d **Screen the power plant construction areas.**

Impact V-2: Long-term visibility of land scars and vegetation clearance in arid and semi-arid landscapes (Class II)

Land scarring from activities adjacent to construction sites can be long-lasting (several years) in arid and semi-arid environments where vegetation recruitment and growth are slow. Vegetation clearance could occur in conjunction with project construction or during the life of the project if a changed vege-

tation structure is maintained adjacent to the power plant sites. This analysis does not apply to the Miramar Peaker.

Long-term land scarring and vegetation clearance impacts would potentially constitute significant visual impacts that would be mitigated to levels that are less than significant (Class II) with effective Implementation of mitigation measures V-2a (Reduce in-line views of land scars), V-2b (Reduce visual contrast from unnatural vegetation lines), V-2c (Reduce color contrast), V-2e (Minimize vegetation removal), and ~~V-2f (Restrict vehicle travel and restore land)~~G-1b (Implement erosion control procedures).

Mitigation Measures for Impact V-2: Long-term visibility of land scars and vegetation clearance in arid and semi-arid landscapes

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars on non-Forest lands.**

V-2e **Minimize vegetation removal.**

G-1b **Implement erosion control procedures.** [APM GEO-2]

~~**V-2f** **Restrict vehicle travel and restore land.**~~

Visual Resources Operational Impacts for Peakers

The peakers would result in significant but mitigable (Class II) and adverse but less than significant (Class III) visual impacts. Long-term, operational visual impacts would be experienced by viewers in the vicinity of each peaker site. Four representative Key Viewpoint (KVPs 75 though 78) were selected to characterize the visual impacts that would occur at the peaker sites.

Impact V-NW13: Increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 75 on Miramar Road *(VS-VC)* ***(Class III)***

Figure E.6.3-5A presents the existing view to the south from Key Viewpoint 75 on the north side of Miramar Road, directly across from the Miramar Peaker site. This viewpoint was selected because it is one of the few locations from which the peaker would be visible. Figure E.6.3-5B presents a visual simulation that depicts the peaker situated behind the commercial buildings adjacent to the south side of Miramar Road. Most of the peaker facilities would be screened from view, leaving only the upper portions of the HRSG and stack extending above intervening structures and trees. The slight increase in industrial character would be minimally visible given the site's location and the brief duration of view as a result of moderate traffic speeds and the right angle of view. The resulting visual contrast would be low-to-moderate and the peaker would appear subordinate-to-co-dominant compared to the existing landscape features including the foreground commercial buildings. View blockage of the background sky would be low. The overall visual change would be low-to-moderate when the three equally weighted factors of visual contrast, project dominance, and view blockage are combined. In the context of the existing landscape's moderate visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). However, mitigation measure V-NW13a is recommended to reduce the visual impact visible to Miramar Road. While Impact V-NW13 is less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of views of the Miramar Peaker from Miramar Road.

Mitigation Measure for Impact V-NW13: Increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 75 on Miramar Road

V-NW13a Reduce peaker visibility. The Project Proponent shall submit to the agency with jurisdiction (Agency) a Peaker Screening Plan that reduces visibility of the Miramar Peaker when viewed from Miramar Road. The Project Proponent shall plant appropriate vegetation species north of the peaker site in order to intersect sightlines from Miramar Road to the south toward the peaker. The Project Proponent shall submit the Plan to the Agency for review and approval at least 90 days prior to installing the landscape screening. If the Agency notifies the Project Proponent that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, the Project Proponent shall prepare and submit for review and approval a revised Plan. The plan shall include but not necessarily be limited to:

- 11"x17" color simulations of the proposed landscaping at five (5) years when viewed from Key Viewpoint 75.
- Plan view to scale depicting the project and the location of screening elements.
- A detailed list of any plants to be used; their size and age at planting; the expected time to maturity, and the expected height at five years and at maturity.

The Project Proponent shall complete installation of the screening prior to the start of project operation. The Project Proponent shall notify the Agency within seven days after completing installation of the screening, that the screening components are ready for inspection.

Figure E.6.3-5A. Key Viewpoint 75 – Miramar Road – Existing View
CLICK HERE TO VIEW

Figure E.6.3-5B. Key Viewpoint 75 – Miramar Road – Visual Simulation
CLICK HERE TO VIEW

Impact V-NW14: Increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 76 on eastbound SR76 (VS-VC) (Class II)

Figure E.6.3-6A presents the existing view to the north from Key Viewpoint 76 on eastbound SR76. Figure E.6.3-6B presents a visual simulation that depicts the Pala Peaker situated on the flats immediately north of SR76 and east of the existing Pala Substation. The new peaker would introduce substantial industrial character into a landscape presently absent similar features. Although there is a small substation (Pala) located to the immediate west, the peaker facilities would contribute substantially greater structural mass and prominence and cause considerably more view blockage of the hillsides. The resulting visual contrast would be high and the peaker would appear co-dominant compared to the background landforms. View blockage of the background hillsides would be moderate-to-high. The overall visual change would be moderate-to-high when the three equally weighted factors of visual contrast, project dominance, and view blockage are combined. In the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be significant but mitigable (Class II). Mitigation measure V-NW13a as applied to this peaker is required to reduce the visual impact visible to SR76. Specifically, vegetative screening must be planted along the north side of SR76 to screen views of the peaker site from SR76. This viewpoint analysis is considered representative of views of the Pala Peaker from SR76.

Mitigation Measure for Impact V-NW14: Increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 76 on eastbound SR76

V-NW13a Reduce peaker visibility.

Impact V-NW15: Increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 77 at Founders Park in Ladera Ranch *(VS-VC)* ***(Class II)***

Figure E.6.3-7A presents the existing view to the southeast from Key Viewpoint 77 in Founders Park off of Avendale Boulevard, west of Antonio Parkway in Ladera Ranch. Figure E.6.3-7B presents a visual simulation that depicts the Margarita Peaker situated on the hill immediately east of Antonio Parkway and east of the existing Margarita Substation. The new peaker would introduce additional industrial character into a predominantly suburban landscape with few industrial features. The existing Margarita Substation immediately adjacent to the peaker site is substantially screened by a hillside berm. The new peaker, which would be located further to the east away from the edge of the ridge would also be partially screened, with only the upper portions of the HRSG and stack visible to views below. However, the peaker would be more highly exposed to the elevated views from hillside homes to the south. The resulting visual contrast would be moderate-to-high and the peaker would appear subordinate to co-dominant compared to the foreground residential structures and background landforms. View blockage of the background hillsides would be low-to-moderate. The overall visual change would be moderate when the three equally weighted factors of visual contrast, project dominance, and view blockage are combined. In the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be significant but mitigable (Class II). Mitigation measure V-NW13a as applied to this peaker is required to reduce the visual

Figure E.6.3-6A. Key Viewpoint 76 – SR76 – Existing View
CLICK HERE TO VIEW

Figure E.6.3-6B. Key Viewpoint 76 – SR76 – Visual Simulation
CLICK HERE TO VIEW

Figure E.6.3-7A/B. Key Viewpoint 77 – Founders Park – Existing View and Simulation
CLICK HERE TO VIEW

impact visible to SR76. Specifically, vegetative screening must be planted along the east and south sides of peaker/substation site to screen views of the peaker from both lower elevation views from the west (residences and Founders Park) and higher elevation views (hilltop homes to the south). This viewpoint analysis is considered representative of views of Margarita Peaker from both lower and higher elevation views in the vicinity of the peaker site.

Mitigation Measure for Impact V-NW15: Increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 77 at Founders Park in Ladera Ranch

V-NW13a Reduce peaker visibility.

Impact V-NW16: Increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 78 on Northbound Borrego Valley Road *(VS-VC)* ***(Class II)***

Figure E.6.3-8A presents the existing view to the northeast from Key Viewpoint 78 on northbound Borrego Valley Road, just north of Palm Canyon Drive. Figure E.6.3-8B presents a visual simulation that depicts the Borrego Springs Peaker situated immediately east of the existing Borrego Springs Substation. The new peaker would introduce additional industrial character into a predominantly natural-appearing desert valley landscape with few industrial features other than the existing substation. The new peaker would add considerable structural mass and cause additional view blockage of the background mountains. The resulting visual contrast would be moderate-to-high and the peaker would appear co-dominant compared to the foreground desert valley floor and background mountains. View blockage of the background landforms would be moderate. The overall visual change would be moderate when the three equally weighted factors of visual contrast, project dominance, and view blockage are combined. In the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be significant but mitigable (Class II). Mitigation measure V-NW13a as applied to this peaker is required to reduce the visual impact visible to Borrego Valley Road, Palm Canyon Drive, Henderson Canyon Road, Peg Leg Road, Inspiration Point, and Fonts Point. Specifically, vegetative screening must be planted along the four sides of peaker/substation site to screen views of the peaker from the sensitive viewing areas mentioned above. Various species of palm would be appropriate choices for screening because of the presence of these trees in the vicinity and north valley area. This viewpoint analysis is considered representative of views of the Borrego Spring Peaker from adjacent roadways.

Mitigation Measure for Impact V-NW16: Increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 78 on northbound Borrego Valley Road

V-NW13a Reduce peaker visibility.

Figure E.6.3-8A/B. Key Viewpoint 78 – Borrego Valley Road – Existing View and Simulation
CLICK HERE TO VIEW

Overall Visual Resources Impacts of the New In-Area All-Source Generation Alternative

Conventional Generation

Construction of the Power plant and linear facility and the Peakers would result in both short-term (visibility of activities, equipment, and personnel) and long-term (land scars in arid and semi-arid environments) visual impacts. However, both the short-term and the long-term impacts (from land scarring) could be mitigated to levels that would be less than significant (Class II). There would be no significant, unmitigable (Class I) visual impacts as a result of the construction of the Power plants and peakers.

The Power plant and facilities would result in a significant, unmitigable (Class I) visual impact during project operation. SDCPP would introduce large structures (over 100-foot tall) with industrial character to an undeveloped 60-acre parcel bordered by vegetation and wildlife habitat and would result in structural visual contrast, industrial character, and view blockage. There would be a number of operational impacts for the Peaker plants when the three equally weighted factors of visual contrast, project dominance, and view blockage are combined. However, in the context of the existing Peaker landscape's moderate-to-high visual sensitivity, the resulting visual impacts would be adverse but significant (Class III) to significant but mitigable (Class II) for each of the Peaker plants.

Renewable Generation

For overall impacts of the New In-Area Renewable Generation, please see Section E.5 (Solar Photovoltaics, Biomass/Biogas and Wind Components).

Figure Visual. Resource Appendix 1.
CLICK HERE TO VIEW

E.6.4 Land Use

Land Use for SBRP

Laws, Ordinances, Regulations, and Standards

The significance criteria used for the analysis of land use impacts is set forth in Section D.4.4 of this EIR/EIS.

The SBRP would be certified pursuant to Section 25500 of the Warren-Alquist Act. The California Energy Commission (CEC) certification would be in lieu of all State, regional and local permits and requirements. As such, the CEC has preemptory jurisdiction over local agencies. Regardless, consistency of the SBRP with plans and policies is considered in EIR/EIS Appendix 2 and Section D.16.

Relevant land use plans and policies include the City of Chula Vista adopted local coastal program (LCP), which has been approved by the California Coastal Commission (CCC). The LCP includes all of the land use plans and policies for all development within those portions of the city located within the coastal zone. In the AFC for the SBRP, the SBRP was analyzed for its conformity with land use designations and policies described in the Port of San Diego Master Plan (CMP), the Draft Chula Vista Bay Front Master Plan (which is in the process of being developed), and the City of Chula Vista General Plan (which is not applicable as a matter of law but was analyzed for informational purposes). In addition, the City of San Diego General Plan and City of National City General Plan and Zoning Ordinance policies were also listed because, consistent with CEC AFC requirements, applicable plans and policies within a 1-mile area surrounding the SBRP site and 0.25 miles on either side of the linear facilities need to be identified and an area south of the plant site falls within the jurisdiction of the City of San Diego. The SBRP was also analyzed for conformity with the each of the cities' General Plan and zoning.

The Port of San Diego Master Plan (2003), (i.e., the CMP) is the planning document that applies to the SBRP site and all linear facilities. The Chula Vista Bay Front Master Plan process is intended to amend the Port's CMP to guide future development in the Chula Vista bay front area.

Land Use Setting for SBRP

The project site is located in the City of Chula Vista, in San Diego County, on Port property. The project site is located adjacent to San Diego Bay. It is relatively flat, and is bound by the San Diego Bay on the west and Bay Boulevard and Interstate 5 (I-5) on the east. To the south is a salt production facility and to the north is the existing SBPP. The immediate area around the project site is industrial in nature, with some residential housing over 800 feet to the southeast and due east (on the east side of I-5).

The existing Port CMP designates the site as industrial. The Draft Chula Vista Bay Front Master Plan designates the site for the development of energy/utility uses such as a power plant, switchyard and other power plant-related structures. The City General Plan and Zoning Ordinance designate the site as General Industrial. Therefore, a power plant is consistent with these designations.

The linear facilities and their proposed corridors fall on previously developed lands, existing rights-or-way, or existing easements. Because the linear facilities are proposed so close to the site, the land use designations are the same as for the SBRP site.

Land Use Construction Impacts for SBRP

Impact L-1: Construction would temporarily disturb land uses at or near the alignment (Class II)

In the event the Bay Front Master Plan is not certified prior to the CEC's license decision, then the CEC would look to ensure that the project is consistent with CCC Coastal Act Chapter 8 policies, Chapter 8 policies relate to development within ports and require that projects protect water resources, minimize environmental impacts, and conform to Port Master Plans. Plans such as the Bay Front Master Plan regulate the anticipated Bay Front development and are developed with the appropriate CEQA clearances that consider the potential impacts among multiple projects. There are no habitat conservation plans or natural community conservation plans that apply to this site. Adverse effects experienced by nearby land uses during construction would be reduced to less than significant levels with Mitigation Measures L-1a, L-1d, and L-1e (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measure for Impact L-1: Construction would temporarily disturb land uses at or near the alignment

L-1a **Prepare Construction Notification Plan.**

L-1d **Provide advance notice and appoint public affairs officer.**

L-1e **Notify property owners and provide access.**

Land Use Operational Impacts for SBRP

Presence of SBRP at the existing SBPP site would not cause any operational disruptions of land uses or other land use impacts. The SBRP would not physically divide these established uses but would border them. The SBRP facilities would not constitute a physical division of an established community. The proposed route would circumvent land uses and not bisect them. In addition, the SBRP would not establish a permanent barrier or obstacle between uses such that a perceived physical division would occur. While SBRP facilities would be present, travel or connections within the community would not be impeded so as to create a divide. As such, no land use impacts relating to the division of an established community (Impact L-2) would occur (No Impact), and no mitigation would be required.

Land Use for SDCPP

Land Use Setting for SDCPP

The SDCPP site is located within MCAS Miramar, in a rural location near the Padre Dam Water Recycling Facility. This site is surrounded by large central north/south ridgelines with several side ridges and adjacent valleys. The SDCPP site is undeveloped with the exception of a system of dirt roads and fuel breaks. There are no residential or commercial land uses adjacent to the site. However, there is a riparian corridor approximately 500 feet from the eastern boundary which is addressed in Section E.6.2 Biological Resources. The site is on designated grazing land, addressed in Section E.6.6 Agriculture.

The closest residences are medium-density single family houses south of the project site and across Fanita Parkway. Houses nearest the potential site boundary are on Strathmore Drive and over 1000 feet away. Additionally, the City of Santee has approved the development of 1,380 homes on land east of the SDCPP site (the Fanita Ranch development).

Construction and Operational Impacts

Land Use Construction Impacts for SDCPP

Impact L-1: Construction would temporarily disturb land uses at or near the alignment (Class II)

Construction impacts associated with SDCPP would disrupt nearby land uses for approximately 24 months. Construction would require developing linear facilities in area roadways, including the wastewater discharge pipeline to the Padre Dam Sewage Treatment Facility, underground water supply pipeline, natural gas tie-in to an existing 20-inch line in Mast Boulevard and new access (30 feet wide) and loop roads (20 feet wide). All of the pipelines would be installed in existing and new roadways and public ROWs. The SDCPP would need to comply with MCAS Miramar guidelines as part of the 2003 Defense Authorization Bill HR 4546. Implementation of mitigation measures L-1c, L-1d, and L-1e below, would help minimize potential land use impacts relating to construction activities. Adverse effects experienced by nearby land uses during construction would be reduced to less than significant levels with the mitigation measure below (Class II).

Mitigation Measures for Impact L-1: Construction would temporarily disturb the land uses it traverses or adjacent land uses

L-1a **Prepare Construction Notification Plan.** Sections D.4.5 and D.4.11 include descriptions of mitigation measures for land use impacts.

L-1c **Coordinate with MCAS Miramar.**

L-1d **Provide advance notice and appoint public affairs officer.**

L-1e **Notify property owners and provide access.**

Land Use Operational Impacts for SDCPP

Presence of SDCPP within MCAS Miramar would not cause any operational disruptions of land uses or other land use impacts (Impact L-2, No Impact). The nearest existing or proposed residential uses would be over 1000 from the project boundary. The power plant owner would need to comply with all MCAS Miramar entry guidelines for access to the SDCPP site and equipment.

Land Use for Peakers

Land Use Setting for Peakers

Miramar Substation. The existing Miramar Energy Facility is located at 5875 Consolidated Way in San Diego just north of the Miramar Marine Corps Air Station and south of Miramar Road. The site is adjacent to commercial land uses to the east and a recycling center to the west. There are no residential land uses in the vicinity. Railroad tracks surrounding the existing site and between Consolidated Way and Miramar Road are used for storage. The Miramar peaking power plant would be adjacent to an existing combustion turbine rated at 47 MW. The available site is 1.5 acres and is graded and paved.

The Miramar Substation is designated as "Rural Development Area RDA" within the San Diego County General Plan.[20] The RDA includes much of the privately owned properties outside the service

[20] San Diego County, 2007. General Plan Land Use Element, located online at: http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/planning/GP2020/pubs/elements/landuse.pdf. Accessed May 8.

boundaries of the County Water Authority. This area is primarily made up of agricultural or unimproved lands and remote pockets of residential development. Future development would generally be dictated by the availability of groundwater and other environmental and resource constraints. This land use designation and the use of applicable General Plan regulations are delineated on community and subregional plan maps, and are part of the Zoning Ordinance.

Pala Substation. The existing Pala Substation is located in the 10300 block of Pala Road (State Route 76) in Pala which is located in northern San Diego County within proximity to the Pala Indian Reservation. The Pala Substation is located on 15 acres of mildly sloping land. A portion of the site proposed for development includes an existing orchard and a fenced in area with a few small structures. The Pala Substation is designated as RDA within the Sand Diego County General Plan.[21]

Margarita Substation. The existing Margarita Substation is located in the 28400 block of Antonio Parkway in Ladera Ranch. The community of Ladera Ranch is located east of Interstate 5 between Mission Viejo and State Route 74 in Orange County. The substation is located on 3.0 acres of undeveloped land. The undeveloped portion of the substation is fairly steeply sloping land that appears to be situated on a concrete pad. This property is immediately surrounded by another concrete pad and undeveloped or agricultural land on the outskirts of Ladera Ranch. According to the Orange County General Plan, the Margarita Substation is located on land designated as Urban Activity Center.[22] The Urban Activity Center land use category identifies locations intended for high-intensity mixed-use development. Appropriate land uses include, but are not limited to, residential, commercial, and office uses; industrial parks and materials recovery/recycling facilities; civic, cultural, and educational uses; and childcare facilities.

Borrego Springs Substation. The existing Borrego Springs Substation is located on Borrego Valley Road in Borrego Springs in northeastern San Diego County. The site is along Borrego Valley Road just north of Palm Canyon Drive. The substation site includes 2 acres of graded but undeveloped desert land. The Borrego Springs Substation is designated as RDA within the Sand Diego County General Plan.[23]

Construction and Operational Impacts

The significance criteria used for the analysis of land use impacts is set forth in Section D.4.4 of this EIR/EIS.

Land Use Construction Impacts for Peakers

Power plant construction would disturb existing land uses near the project sites for the duration of construction (Impact L-1), but with Implementation of mitigation measures, this impact would be less than significant (Class II).

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[21] San Diego County, 2007. General Plan Land Use Element, located online at: http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/planning/GP2020/pubs/elements/landuse.pdf. Accessed May 8.

[22] Orange County, 2007. Orange County General Plan Land Use Element located online at: http://www.ocplanning.net/docs/GeneralPlan2005/Chapter_III_Land_Use_Element_Map_2005.pdf. Accessed on May 8.

[23] San Diego County, 2007. General Plan Land Use Element, located online at: http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/planning/GP2020/pubs/elements/landuse.pdf. Accessed May 8.

Impact L-1: Construction would temporarily disturb land uses at or near the alignment (Class II)

Construction of the peakers would occur on existing SDG&E-owned property at existing substation sites or adjacent open space. Construction activities would have temporary impacts on any surrounding land uses. Any utility connections required for peaker generator operations (water, sewer, natural gas) would be constructed within existing city streets or SDG&E ROW and would result in temporary impacts to surrounding land uses. Implementation of mitigation measures L-1a, L-1d and L-1e below, would help minimize potential land use impacts relating to construction activities to less than significant levels (Class II).

Mitigation Measures for Impact L-1: Construction would temporarily disturb land uses at or near the alignment

L-1a **Prepare Construction Notification Plan.** Sections D.4.5 and D.4.11 include descriptions of mitigation measures for land use impacts.

L-1d **Provide advance notice and appoint public affairs officer.**

L-1e **Notify property owners and provide access.**

Land Use Operational Impacts for Peakers

Presence of peakers on existing SDG&E-owned property at existing substation sites would not cause any operational disruptions of land uses or other land use impacts (Impact L-2, No Impact). Since the peakers would be operated on SDG&E-owned property in existing industrial and open space area, they would not result in physically dividing any established communities. As electrical facilities already occur within the substation sites, electrical infrastructure land use has been established at the sites. While some substation sites would require the conversion of undeveloped or agricultural land (Pala, Margarita, and Borrego Springs) to substation use, due to the immediate proximity of existing electrical facilities and substation footprint to this land, the peakers would not disrupt adjacent land uses. Impacts related to agricultural resources for peakers are discussed in Section E.6.6.

Overall Land Use Impacts of the New In-Area All-Source Generation Alternative

Conventional Generation

Construction impacts associated with the power plant and facilities would disrupt nearby land uses for approximately 24 months. Construction of the peakers would occur on existing SDG&E-owned property at existing substation sites or adjacent open space. Construction activities would have temporary impacts on any surrounding land uses. Any utility connections required for peaker generator operations (water, sewer, natural gas) would be constructed within existing city streets or SDG&E ROW and would result in temporary impacts to surrounding land uses. Adverse effects experienced by nearby land uses during construction of the power plant and peakers would be reduced to less than significant levels with mitigation (Class II). No impacts would result from operation of the Power plant or the peakers.

Renewable Generation

For overall impacts of the New In-Area Renewable Generation, please see Section E.5 (Solar Photovoltaics, Biomass/Biogas and Wind Components).

Figure Ap.LU E.6-1 to Ap.LU E.6 -3. Land Use: New In-Area All-Source Generation
CLICK HERE TO VIEW

E.6.5 Wilderness and Recreation

Wilderness and Recreation for SBRP

Wilderness and Recreation Setting for SBRP

The SBRP site is zoned for industrial use and primarily supports non-native annual grassland that surround the old LNG tank containment berm. There are no Significant Natural Areas or Designated Ecological Reserves within the SBRP area. However, the SBRP site is bordered on the west by the Chula Vista Wildlife Reserve and South San Diego Bay, and the South Bay Unit of the San Diego National Wildlife Refuge. The South Bay Unit of the San Diego Bay National Wildlife Refuge encompasses 3,940 acres, and habitats consist primarily of coastal salt marsh, tidal flats, and salt ponds.

The San Diego Bay attracts thousands of migratory birds in the winter months. This South San Diego Bay area is a prized recreational bird watching area within a highly developed city, particularly during the winter migration season. The South Bay Unit of the San Diego NWR has been designated a Globally Important Bird Area by the American Bird Conservancy.

Wilderness and Recreation Impacts for SBRP

The SBRP would be built on an industrial site where the existing SBPP currently affects recreation opportunities. Presence of SBRP at this site would not create any new adverse affects to wilderness or recreation. Impact WR-2 (Presence of a transmission line or substation would permanently change the character of a recreation area, diminishing its recreational value) would not occur because the SBRP plant would be built adjacent to an existing power plant and thus would not further impact the character of a recreation area., Impact WR-3: Presence of the transmission line would permanently preclude recreational activities) would not occur because the SBRP would be built adjacent to an existing power plant and it would be built on an industrial site that already affects any recreational opportunities. Impact WR-4 (Presence of a transmission line in a designated wilderness or wilderness study area (WSA) would require reclassification of the affected land) would not occur because there is no designated wilderness or WSA near the proposed SBRP site. The full text of the mitigation measures appears in Appendix 12.

Impact WR-1: Construction activities would temporarily reduce access and visitation to recreation or wilderness areas (Class II)

Construction of SBRP would not physically reduce access or visitation to bird watching areas. However, noise produced during construction would adversely affect recreational bird watching uses at the south San Diego Bay. With implementation of noise control measures identified in Section E.6.8 (Mitigation Measure N-1a), impacts to recreation areas would be less than significant (Class II).

Mitigation Measures for Impact WR-1: Construction activities would temporarily reduce access and visitation to recreation or wilderness areas

L-1a **Prepare Construction Notification Plan.**

N-1a **Implement Best Management Practices for construction noise.**

Wilderness and Recreation for SDCPP

Wilderness and Recreation Setting for SDCPP

The SDCPP site is located in an undeveloped section of MCAS Miramar. There are no designated wilderness ~~or recreational facilities~~ areas adjacent to or near the SDCPP site. The Stowe Trail runs through the SDCPP site and the Santee Lakes recreation area, which provides various recreational opportunities (e.g., camping, fishing, boating) is adjacent to the site. Also, the SDCPP site is near an RV campground. The general character of the SDCPP site consists of open space and central north/south ridgelines with several side ridges and adjacent valleys. This site is designated Department of Defense property.

Wilderness and Recreation Impacts for SDCPP

Section D.5.4 includes a discussion of significance criteria for impacts related to wilderness and recreation. There are no designated wilderness ~~or recreational~~ areas or WSAs adjacent to or near the SDCPP site. Therefore, ~~presence of SDCPP at this site would not create any new adverse affects to wilderness or recreation. Impact WR-2 (Presence of a transmission line or substation would permanently change the character of a recreation area, diminishing its recreational value) would not occur because there are no recreation areas adjacent to the proposed SDCPP site. Impact WR-3: Presence of the transmission line would permanently preclude recreational activities) would not occur because there are no recreational activities near the proposed SDCPP site. I~~impact WR-4 (Presence of a transmission line in a designated wilderness or wilderness study area would require reclassification of the affected land) would not occur ~~because there are no wilderness areas or WSAs near the proposed SDCPP site~~.

Impact WR-1: Construction activities would temporarily reduce access and visitation to recreation or wilderness areas (Class II~~I~~)

The noise and presence of heavy equipment associated with project construction may temporarily reduce visitation to the Stowe Trail, Santee Lakes recreation area, and RV campground. Recreationists may cancel or schedule their visits to avoid construction periods thereby resulting in temporarily reduced visitation, especially to segments of the Stowe Trail, where construction could pose a safety hazard to trail users. Such a disturbance to recreational resources would result in significant impacts (Class II).

Construction-related impacts to recreational resources within and near the SDCPP site would be mitigated to a less than significant level through implementation of Mitigation Measures WR-1a (Coordinate construction schedule and activities with the authorized officer for the recreation area), WR-1b (Provide temporary detours for trail users), and WR-1c (Coordinate with local agencies to identify alternative recreation sites). ~~Construction activities would cause an adverse impact to visitors traversing adjacent roadways, but would not reduce access or visitation any wilderness or recreation areas. Any impacts from short term construction nuisances would be less than significant (Class III). No mitigation is required.~~

Mitigation Measures for Impact WR-1: Construction activities would temporarily reduce access and visitation to recreation or wilderness areas

WR-1a Coordinate construction schedule and activities with the authorized officer for the recreation area.

WR-1b Provide temporary detours for trail users.

WR-1c Coordinate with local agencies to identify alternative recreation areas.

Impact WR-2: Presence of a power plant would change the character of a recreation area, diminishing its recreational value (Class II)

The SDCPP would introduce a new feature, much more industrial in character than the existing landscape visible from these recreation areas. As described in Section E.6.3 (Visual Resources), the increase in structural complexity and industrial character resulting from presence of the ENPEX project would contrast with the surrounding natural landscape, and would directly adversely affect the character of recreation areas proximate to the SDCPP site and result in a significant and unmitigable visual impact (Class I). This impact was described in the Draft EIR/EIS (Section E.6.3) and also in the Recirculated Draft EIR/Supplemental Draft EIS (Section 4.2.2). Visual Resources Mitigation Measures V-3a, V-NW9a, V-NW9b, V-NW12a, and V-NW-12b are presented to reduce visual impacts to the recreational value of the Santee Lakes recreation area and the RV campground, but the impact would remain significant for these recreation areas.

Mitigation Measures for Impact WR-2: Presence of a power plant would change the character of a recreation area, diminishing its recreational value

V-3a Reduce visual contrast of towers and conductors.

V-NW9a Develop and implement architectural treatment for the power plant.

V-NW9b Develop and implement a Landscape Concept Plan.

V-NW12a Site the power plant to take advantage of topography for screening.

V-NW12b Reduce visual plumes from power plant.

Impact WR-3: Presence of a power plant would permanently preclude recreational activities (Class II)

Construction and operation of the SDCPP would block the Stowe Trail, thereby precluding use by recreationists and resulting in a significant impact (Class II). Mitigation Measure WR-3c, which requires coordination between SDCPP developers, the County of San Diego, the City of San Diego and the City of Santee to select area for the plant that would minimize the direct effect on the Stowe Trail and reduce this impact to a less than significant level.

Mitigation Measure for Impact WR-3: Presence of a power plant would permanently preclude recreational activities

WR-3c Design power plant to accommodate Stowe Trail. The SDCPP, if constructed, shall be designed based on coordination with the County of San Diego, the City of San Diego and the City of Santee in order to minimize effects on the Regional Stowe Trail, and shall accommodate the trail passing around the power plant site.

Wilderness and Recreation for Peakers

Wilderness and Recreation Setting for Peakers

Miramar Substation. The nearest recreational facilities to the Miramar Substation are the Miramar Memorial Golf Course, located approximately 0.5 miles east of the existing substation, and El Camino Memorial Park, located approximately 1.1 miles northwest of the existing substation.[24] There are no other recreational facilities identified near the alternative Miramar peaking power plant site.

[24] Thomas Brothers, 2007. Year 2006 Thomas Brothers Map Guide for San Diego County.

Pala Substation. The nearest recreational facility to the Pala Substation is the Pala Mesa Golf Course, located approximately 2.5 miles west of the existing substation.[25]

Margarita Substation. Unincorporated Orange County has 63 developed local parks and 20 additional parks that have been offered to and accepted by the County but are not yet developed.[26] Almost 25 percent of the local parks that have been accepted by the County remain undeveloped. Similarly, approximately 25 percent of the net local park acreage is undeveloped (116.56 net acres). Approximately 63 percent of the total gross acres accepted by the County is usable as defined by the Local Park Code. In addition, there are a number of local park sites which have been offered to the County, but not yet accepted at this time. The County's local park policy strives to provide 2.5 acres of local park land for every 1,000 County residents. This policy is implemented through the Local Park Code.[27] The nearest recreational facility to the Margarita Substation is Founders Park located approximately 0.3 miles west of the substation.[28]

Borrego Springs Substation. The nearest recreational facility to the Borrego Springs Substation is the Anza Borrego State Park located approximately 1.5 miles southeast of the substation and the Springs at Borrego Golf Course located approximately 1.2 miles north of the substation.[29]

Construction and Operational Impacts

Section D.5.4 includes a discussion of significance criteria for impacts related to wilderness and recreation.

Wilderness and Recreation Construction Impacts for Peakers

Project construction for these alternative components would cause an adverse but less than significant impact on access and visitation to recreation areas (Impact WR-1, Class III).

Impact WR-1: Construction activities would temporarily reduce access and visitation to recreation or wilderness areas (Class III)

Construction of peakers would not reduce access or visitation any wilderness or recreation areas as they would all be built at least 1,500 feet from any recreation center and therefore both noise and visual construction impacts would be less than significant. Therefore, any impacts from short-term construction nuisances would be less than significant (Class III).

Wilderness and Recreation Operational Impacts for Peakers

There are no designated wilderness or recreational areas adjacent to or near the peaker sites. Therefore, presence of the peakers would not impede future development of local recreational facilities, result in any physical impacts to wilderness lands, or create any new adverse affects to wilderness or recreation. The nearest recreational areas to any of the peakers are over 1500 feet away and would not directly or

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[25] Ibid.

[26] Orange County, 2007. General Plan Recreation Element, http://www.ocplanning.net/docs/GeneralPlan2005/Chapter_VII_Recreation.pdf. Accessed May 8.

[27] Ibid.

[28] Thomas Brothers, 2007. Year 2006 Thomas Brothers Map Guide for Orange County.

[29] Thomas Brothers, 2007. Year 2006 Thomas Brothers Map Guide for San Diego County.

indirectly disrupt activities on these recreational areas, nor would they substantially reduce important factors that contribute to their value. In addition, there are existing structures between the new peaker stations and the existing recreational facilities that would further buffer the recreational facilities from any operational impacts. Impact WR-2 (Presence of a transmission line or substation would permanently change the character of a recreation area, diminishing its recreational value), Impact WR-3: Presence of the transmission line would permanently preclude recreational activities), and Impact WR-4 (Presence of a transmission line in a designated wilderness or wilderness study area would require reclassification of the affected land) would not occur.

Overall Wilderness and Recreation Impacts of the New In-Area All-Source Generation Alternative

Conventional Generation Renewable Generation

Construction of power plant and facilities would not reduce access or visitation to recreation areas; however, noise produced during construction would adversely affect recreational bird watching uses at the south San Diego Bay near the SBRP site. With implementation of noise control measures identified in Section E.6.8 (Mitigation Measure N-1a), impacts to recreation areas would be less than significant (Class II). Construction of the peakers would result in adverse but less than significant impacts (Class III) only. There are no impacts from operation of the power plants or peakers.

Renewable Generation

For overall impacts of the New In-Area Renewable Generation, please see Section E.5 (Solar Photovoltaics, Biomass/Biogas and Wind components).

E.6.6 Agriculture

Agriculture for SBRP

Agriculture Setting for SBRP

Within the southern portion of a one-mile radius around the SBRP site, there is one area, approximately 45.6 acres in size, that is designated as a Farmland of Local Importance. No Agricultural Resources or DOC Farmlands are present along the linear features for the SBRP.

Agriculture Impacts for SBRP

Construction of the SBRP would occur entirely on previously developed industrial lands. These lands are not currently used for agriculture and there is no agricultural land in the vicinity; thus, there would be no impacts to Agricultural resources and Impact AG-1 (Construction activities would temporarily interfere with Active Agricultural Operations) would not occur. The SBRP would not occur on DOC lands nor on Williamson Act lands and therefore Impact AG-2 (Operation would permanently convert DOC Farmland to non-agricultural use) and Impact AG-4 (Operation would permanently convert Williamson Act lands to non-agricultural use) would not occur. Similarly, the presence of the SBRP power plant on industrial lands (approximately one mile from the nearest designated agricultural lands) would not cause Impact AG-3 (Operation would permanently interfere with Active Agricultural Operations).

During operation of conventional fossil fuel-fired power plants, there is a concern in some areas that emissions can deposit on sensitive soils or vegetation and cause adverse effects, such as increased nitrification or nitric acid deposition. This would be a concern in environments highly sensitive to nutrients or salts, such as serpentine habitats. For SBRP, no serpentine habitats occur in the area. The addition of small amounts of nitrogen from the SBRP to urban soil-vegetation systems would be insignificant. The addition of small amounts of nitrogen to agricultural areas would be less than significant within the context of fertilizers, herbicides, and pesticides typically used.

Agriculture for SDCPP

Agriculture Setting for SDCPP

The SDCPP site is on ~~60~~ 89.1 acres of Grazing Land, but there are no active agricultural operations within 500 feet of the site. The project site is surrounded by open space, ridgelines, and valleys.

Construction and Operational Impacts for SDCPP

Section D.6.4.1 includes a discussion of significance criteria for impacts related to agricultural resources.

SDCPP would convert approximately ~~60~~ 89.1 acres of DOC Farmland to non-agricultural use (Impact AG-2, Class I). Because there are no existing agricultural operations at the project site or within 500 feet of the site, there would be no impacts to Agricultural resources and Impact AG-1 (Construction activities would temporarily interfere with Active Agricultural Operations) would not occur. Similarly, Impact AG-3 (Operation would permanently interfere with Active Agricultural Operations) would not occur. There are no Williamson Act lands in the vicinity of SDCPP and therefore Impact AG-4 (Operation would permanently convert Williamson Act lands to non-agricultural use) would not occur.

Operational Impacts

Impact AG-2: Operation would permanently convert DOC Farmland to non-agricultural use (Class I)

Because SDCPP would convert more than 10 acres of DOC Farmland, impacts to DOC Farmland as a result of this alternative component would be significant (Class I), and no feasible mitigation measures exist to mitigate this impact to a less than significant level. Section D.6.2 includes a detailed description of impacts to agricultural resources.

Agriculture for Peakers

Agriculture Setting for Peakers

Miramar II Peaker Power Plant/Energy Facility. The Miramar Energy Facility, on which the Miramar II Peaker will be sited, is not located within or adjacent to any designated agricultural land. Furthermore, the Miramar Energy Facility is not located within any farmland designated by the DOC.[30] The Miramar Energy Facility is not located on any Williamson Act lands.

Pala Peaker Power Plant/Pala Substation. The Pala Peaker would be located on 8 acres of land leased from SDG&E on the existing Pala Substation site. According to the San Diego County Open Space Element, the Pala Substation is not located within or adjacent to a designated agricultural land use designation.[31] Furthermore, the Pala Substation is not located within any farmland designated by the DOC.[32] The Pala Substation is not located on any Williamson Act lands.

Margarita Peaker Power Plant/Substation. The existing Margarita Substation is located on 3.0 acres of undeveloped land. The new Margarita peaker plant would be located on SDG&E land adjacent to the existing Margarita Substation. This property is immediately surrounded by undeveloped land on the outskirts of Ladera Ranch. The Orange County General Plan Resources Element relies upon the DOC Farmland Mapping and Monitoring Program to identify and classify lands that has agricultural value. According to the DOC and the Orange County General Plan Resources Element, the Margarita Substation is not located within or adjacent to a designated agricultural land use designation or any mapped farmland designation by the DOC.[33,34] The Margarita Substation is not located on any Williamson Act lands. There would be no impact to agricultural resources through the construction and operation of this alternative component.

Borrego Springs Peaker Power Plant/Substation. According to the San Diego County Open Space Element, the Borrego Springs Substation is not located within or adjacent to a designated agricultural land use designation.[35]

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30 California Department of Conservation, 2002. California Farmland Conversion Report 1998-2000.

31 San Diego County, 2007. General Plan Open Space Element, located online at: http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/planning/GP2020/pubs/elements/openspace.pdf. Accessed May 8.

32 California Department of Conservation, 2002. California Farmland Conversion Report 1998-2000.

33 San Diego County, 2007. General Plan Open Space Element, located online at: http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/planning/GP2020/pubs/elements/openspace.pdf. Accessed May 8.

34 California Department of Conservation, 2002. California Farmland Conversion Report 1998-2000.

35 San Diego County, 2007. General Plan Open Space Element, located online at: http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/planning/GP2020/pubs/elements/openspace.pdf. Accessed May 8.

Construction and Operational Impacts

There would be no impact to agricultural resources through the construction and operation of this alternative component.

Agriculture Construction Impacts for Peakers

The peakers would be constructed on existing SDG&E-owned property at existing substation sites within areas of less than 10 acres each.

Impact AG-1: Construction activities would temporarily interfere with Active Agricultural Operations (Class III)

The peaker generators would not convert any land that is designated by the DOC as agricultural land or impact any lands designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance. No soils designated as agriculturally important would be affected. Construction of the peaker generators at the Pala Substation site and the Margarita Substation site would, however, require the conversion of agricultural land to industrial land.

The Pala site contains an existing orchard, and the Margarita site contains agricultural land that would be converted for peaker construction. According to the San Diego County Open Space Element, this land is not designated agricultural use land. Because the amount of agricultural land lost is less than 10 acres, and it is not designated for agricultural use, the conversion of this land is a less than significant impact (Class III).

Impact AG-2: Operation would permanently convert DOC Farmland to non-agricultural use (Class II)

Construction of the peakers adjacent to active agricultural operations would cause short-term and temporary adverse impacts to the surrounding uses. Construction activities (including an increase in vehicular activity and dust emissions) could have a temporary impact on any surrounding agricultural uses. Any indirect impacts to agricultural uses or lands during construction would be short-term. Mitigation measure AG-2a would be required to ensure that construction-related impacts to active agricultural operations would not be significant (Class II). The full text of the mitigation measures appears in Appendix 12.

AG-2a Avoid interference with agricultural equipment.

Agriculture Operational Impacts for Peakers

During operation, the presence of the peaker power plants near agricultural lands would not interfere with agricultural operations or uses (Impact AG-4, Operation would permanently convert Williamson Act lands to non-agricultural use; No Impact).

Impact AG-3: Operation would permanently interfere with Active Agricultural Operations (Class III)

Presence of the peaker generators on agricultural land would permanently convert this land to industrial use. Because no DOC Farmland would be converted, and the amount of agricultural land converted by each peaker site would not be more than 10 acres, this adverse effect is considered to be less than significant (Class III).

Overall Agriculture Impacts of the New In-Area All-Source Generation Alternative

Conventional Generation

Construction and operation of the SBRP would occur entirely on previously developed industrial lands. None of these lands are currently used for agriculture and there is no agricultural land in the vicinity; thus, there would be no impact to Agricultural resources. The SDCPP would permanently convert approximately 60 acres of DOC Farmland to non-agricultural use, a significant, unmitigable impact (Class I).

Construction of the peakers adjacent to active agricultural operations would cause short-term and temporary adverse impacts to the surrounding uses. Construction activities (including an increase in vehicular activity and dust emissions) could have a temporary impact on any surrounding agricultural uses. Any indirect impacts to agricultural uses or lands during construction would be short-term. Mitigation would be required to ensure that construction-related impacts to active agricultural operations would not be significant (Class II). Operation of the peakers would have no significant, unmitigable impacts (Class I) nor any significant but mitigable impacts (Class II).

Renewable Generation

For overall impacts of the New In-Area Renewable Generation, please see Section E.5 (Solar Photo-voltaics, Biomass/Biogas and Wind components).

Figure Ap.AG E.6-1. Agriculture: New In-Area All-Source Generation
CLICK HERE TO VIEW

E.6.7 Cultural and Paleontological Resources

Cultural and Paleontological Resources for SBRP

Cultural Resources Setting for SBRP

The SBRP site and linear facilities would be located along the southeastern shore of the San Diego Bay within the Peninsular Ranges physiographic province of California. The site is relatively flat (approximate elevation 12 feet above mean sea level) and is underlain by artificial fill, alluvium, and terrace deposits. While cultural and paleontological impacts are based on the known or unknown cultural and paleontological resources of a specific site, the types of impacts and mitigation for these impacts is consistent. As such, the SBRP cultural and paleontological impacts and mitigation measures are considered representative of other baseload power plants.

The SBRP area and much of southern San Diego County was occupied ethnographically by the Kumeyaay (Kroeber, 1925). The Kumeyaay were hunters/gatherers, relying on seasonally available animals for subsistence and local resources supplemented by the fruits of trade for all their needs. In the coast region, this pattern is expressed in a heavy reliance upon shellfish augmented by acorns. The entry of Spanish missionaries into the coastal region in 1769 in large part brought about the end of the natives' way of life there. Many of the marshes and tideflats important to Kumeyaay who had lived on the margins of San Diego Bay were filled and were used for waterfront business construction.

By 1888, there were over 100 houses being built in Chula Vista, and population in this area boomed (Menzel, 1942; Gross, 1975). About that time, the National City and Otay Railroad built a line through Chula Vista, which probably crossed the area of the South Bay Power Plant. The first SBPP unit was built in 1960, and additional generation units were built through the early 1970s. Most of the plant area lies on San Diego Bay fill over artificial fill and former tidal marsh.

The SBRP site and linear facilities, and the existing SBPP site were subject to an archaeological resources inventory by CH2M HILL, a consulting firm, at the request of the applicant in advance of the 2006 Application for Certification (SBRP AFC, 2006). This inventory was based on both archive/background research and surface pedestrian reconnaissance survey. A historic architectural resources survey was also conducted to examine resources 45 years old or older at the SBRP site and the existing SBPP site.

In light of known ethnography, prehistory, and archaeology, the entire coastal area is archaeologically highly sensitive. According to information available in the California Historical Resources Information System (CHRIS) files, there have been 15 previous cultural resource surveys conducted within the SBRP "project area." Within one-mile are six recorded cultural resources. Two of these, CA-SDI-13.073H and the Western Salt Company Salt Works, are historic properties determined eligible for nomination to the National Register of Historic Places (NRHP), but none of these sites would be impacted by construction or operation of the SBRP (see Table 9B-110 in Appendix 9B).

The historic significance of the existing SBPP does not appear to meet the criteria for listing in the NRHP, and it is also not a historic resource for the purposes of CEQA. The conclusion of the CH2M HILL archaeological resources inventory did not reveal any significant prehistoric or historic archaeological remains, or any historically or architecturally significant buildings within the SBRP area.

The City of Chula Vista's General Plan which describes preservation of cultural resources may apply: Municipal Code Title 2 Chapter 2.32 Section 2.32.030 protects finite cultural resources which provide the only record of our historic, prehistoric and natural past.

Paleontological Resources Setting for SBRP

Because of its low-lying topography, exposures of ancient marine sediment are much less common in the Chula Vista area, where geochronological data suggest an absence of uplift in the last 200,000 to 500,000 years (Deméré, 1981 cited in Lajoie et al., 1991). Therefore fewer paleontological sites are known in the lowland area including San Diego Bay and most of Chula Vista (City of Chula Vista, 2005). Only one paleontological site is recorded within a three-mile radius of the SBRP site, and that is about 2.8 miles distant to the northeast.

Previous survey of the SBRP site focused on areas where bare soil was observable, and incorporated the understanding that there has been considerable construction-related disturbance in the area in the past. Most recently there have been excavations associated with the dismantling and removal of the LNG tanks The SBRP site rests on a mix of imported fill and Holocene-age sediment dredged from San Diego Bay.

Holocene age (10,000 years ago to Recent) sediments are generally too young to contain fossilized remains, and are determined to have a low paleontological resource potential. However, older marine sediments of Pleistocene age (1.8 million years ago to 10,000 years ago) may be present at an unknown depth and therefore, the paleontological sensitivity of the project area is determined to range from low to high. Fossil localities in older unnamed marine terrace deposits in San Diego's coastal region have yielded well-preserved assemblages of marine invertebrates and rare occurrences of vertebrate fossils.

Cultural and Paleontological Construction Impacts for SBRP

The significance criteria used to analyze impacts related to cultural and paleontological resources for SBRP, SDCPP, and the four peaker plants are set forth in Section D.7.8.

Impact C-~~3~~2: Construction of the project ~~could~~ would cause an adverse change to sites known to contain Native American human remains (Class I)

It is possible that subsurface construction could encounter buried archaeological remains including human remains. The following mitigation measures shall be implemented to ensure that any adverse effect to human remains is avoided, but the impacts would still be considered significant and unavoidable (Class I).

C-1b **Avoid and protect potentially significant resources.**

C-1c **Develop and implement Historic Properties Treatment Plan.**

C-1d **Conduct data recovery to reduce adverse effects.**

C-1e **Monitor construction at known ESAs.**

C-1f **Train construction personnel.**

C-2a **Properly treat human remains.**

Impact C-3: Modifications to the project ~~could~~ would cause an adverse change to unknown significant buried prehistoric and historical archaeological sites or buried Native American human remains (Class I or II)

Historical resources could be unearthed during power plant construction including preparations and grading of laydown and parking areas, and grading and construction of the SBRP. The construction phase would affect approximately 20 acres of Port of San Diego property that is leased by LS Power. As with the Proposed Project, this impact would be mitigated to a level that is less than significant

(Class II) with implementation of the measures listed below, except if human remains were uncovered during construction activities; in that event impacts would remain significant (Class I).

C-1c Develop and implement Historic Properties Treatment Plan.

C-1d Conduct data recovery to reduce adverse effects.

C-1f Train construction personnel.

C-2a Properly treat human remains.

C-3a Monitor construction in areas of high sensitivity for buried resources.

Impact C-4: Construction of the project would cause an adverse change to Traditional Cultural Properties (Class I or II)

To date, no TCPs have been identified at the SBRP site or along the routes of linear facilities. A Sacred Lands File search would need to be conducted and completed in order to note whether lands sacred to Native Americans are present in the vicinity SBRP. As explained in Section D.7.9, when properly coordinated with Native Americans or other traditional groups, mitigation could be developed that can reduce the impact to less than significant (Class II), but in some cases impacts to TCPs would remain significant (Class I). Implementation of mitigation measure C-4a (Complete Consultation with Native Americans and other Traditional Groups) is required; this consultation may reduce impacts to TCPs to a level that is less than significant (Class I or II).

Mitigation Measure for Impact C-4: Construction of the project would cause an adverse change to Traditional Cultural Properties (Class I or II)

C-4a Complete consultation with Native American and other Traditional Groups.

Impact PAL-1: Construction of the project ~~could~~ would destroy or disturb significant paleontological resources (Class II)

Paleontological resources, including an undetermined number of fossil remains and unrecorded fossil sites, associated specimen data and corresponding geologic and geographic site data, and the fossil-bearing strata, could be adversely affected by direct environmental impacts resulting from ground disturbance and earth moving associated with construction of the SBRP. Trenching; augering for concrete pilings and the foundations, installation of electrical towers or poles, and other earth-moving activity could disturb previously undisturbed fossiliferous sediments, which would compromise the scientific value of the paleontological resources affected. Although earth moving associated with construction of SBRP site would be a comparatively short-term activity, the loss of fossil remains, unrecorded fossil sites, associated specimen data and corresponding geologic and geographic site data, and the fossil-bearing strata would be a significant and adverse environmental impact.

Because construction of the SBRP may have potential adverse impacts on significant paleontological resources, the following mitigation measures would be required to reduce the adverse effects to a less than significant level (Class II)

Mitigation Measures for Impact PAL-1: Construction of the project ~~could~~ would destroy or disturb significant paleontological resources

PAL-1a Inventory and evaluate paleontological resources.

PAL-1b Develop Paleontological Monitoring and Mitigation Plan.

PAL-1c Monitor construction for paleontology.

PAL-1d Conduct paleontological data recovery.

PAL-1e Train construction personnel.

Cultural and Paleontological Operational Impacts for SBRP

No impacts to cultural and/or paleontological resources are expected to occur from the operation of the SBRP or any of its ancillary facilities. Impact C-5 (Project operation and maintenance would cause an adverse change to known historic properties) would not occur because there are no known cultural resources in the SBRP. Impact C-6 (Long-term presence of the project would cause an adverse change to known historic architectural (built environment) resources) would not occur because this project will not change the setting of the area.

Cultural and Paleontological Resources for SDCPP

Cultural and Paleontological Setting for SDCPP

The SDCPP site is not currently being used for Marine Corps operations such as rifle range, detonation range or any other military operations. The entire SDCPP site has been previously surveyed for cultural resources. These surveys, however, were conducted more than five years ago, and pre-construction surveys are recommended for the SDCPP site. A cultural resources records search was conducted for the entire SDCPP area and a 0.5-mile radius around it. No portion of the SDCPP area has been adequately surveyed for cultural resources within the last ten years and no known cultural resources are located within the SDCPP study area. There is, however the potential to encounter undiscovered cultural resources during project construction.

According to geologic mapping by Kennedy and Peterson (1975), the SDCPP site is underlain by the following geologic units, from youngest to oldest.

- **Quaternary alluvium.** Quaternary alluvium consists of partly dissected, mostly unconsolidated, poorly sorted sand, silt, clay, and gravel located at the margins of canyons and within valley floors. "Younger" alluvium is Holocene (10,000 years ago to Recent) in age and "Older alluvium" is Pleistocene (1.8 million years ago to 10,000 years ago) in age. Fossil localities in older alluvium deposits throughout southern California have yielded terrestrial vertebrates such as mammoths, mastodons, ground sloths, dire wolves, short-faced bears, saber-toothed cats, horses, camels, and bison (Scott, 2006). Younger alluvium is determined to have a low potential for paleontological resources but is often underlain by older alluvium, which is determined to have a high potential for paleontological resources.
- **Quaternary stream terraces.** Quaternary stream terraces are composed of coarse-grained gravelly sandstones, pebble and cobble conglomerates, and claystones and occur along the margins of San Diego's coastal river valleys. The exact age of these sediments is unknown, but they are likely associated with climatic events of the late Pleistocene (10,000 to 500,000 years ago). The coarse-grained nature of these sediments suggest that fossil preservation would be limited; however, fossils recovered from a few scattered localities include mammoths, ground sloths, mice, pond turtles, hawks, camel, deer, moles, wolves, horses, and rabbit. Quaternary terraces are determined to have a moderate potential for paleontological resources
- **Stadium Conglomerate.** The Stadium Conglomerate is composed of a massive cobble conglomerate within a dark yellowish brown coarse-grained sandstone matrix of terrestrial origin. The sandstone portion of this rock unit constitutes approximately 20 percent of the total formation. The Stadium

Conglomerate is divided into an upper member and a lower member and is middle to late Eocene in age (42 to 44 million years old). Both members of the Stadium Conglomerate have yielded fossil resources. The lower member has yielded sparse but scientifically significant fossilized specimens of opossums, insectivores, primates, rodents, carnivores, rhinoceros, artiodactyls, as well as foraminifers and marine mollusks. The upper member has yielded a scientifically important assemblage of terrestrial mammals. The upper member of the Stadium Conglomerate is determined to have a high potential for paleontological resources in its western extent and a moderate potential in its easternmost outcrops. The lower member of the Stadium Conglomerate is determined to have a high potential for paleontological resources.

- **The Friars Formation.** The Friars Formation is composed predominantly of yellowish-gray nonmarine and lagoonal sandstone and claystone with fluvial cobble conglomerate lenses outcropping in the easternmost exposures. It is middle to late Eocene in age (44 million years ago), and is r*epresentative* of a large-scale marine regression. The Friars Formation has yielded significant remains of terrestrial mammals, marine microfossils and macrofossils, and fossil plants and is determined to have a high potential for paleontological resources.

Construction and Operational Impacts

Cultural and Paleontological Construction Impacts for SDCPP

Because known cultural resources that are potentially eligible for the NRHP or CRHR exist within areas of proposed direct impact, as well as the potential for encountering undiscovered cultural resources, the following impacts could occur during project construction or operation. Please see Appendix 12 for the full text of the Cultural and Paleontological Mitigation Measures.

As there are no known sites of Native American human remains, Impact C-2 (Construction of the project would cause an adverse change to sites known to contain Native American human remains) would not occur.

Impact C-3: Construction of the project would cause an adverse change to unknown significant buried prehistoric and historical archaeological sites or buried Native American human remains (Class I or II)

Types of subsurface features that could be encountered within the SDCPP area include prehistoric resources such as buried living surfaces, trash deposits, hearths, shell middens, burials and cremations. Historical resources that could be unearthed during project construction include refuse pits and privies. Buried archaeological resources may be encountered during preparations and grading of laydown and parking areas, along with grading and construction of the SCDPP. This would result in a significant impact. Impacts to unknown significant prehistoric and historic archaeological sites would be mitigated to a level less than significant (Class II) by implementing Mitigation Measures C-1c, C-1d, C-1f C-2a, and C-3a. As noted previously, impacts to human remains would be mitigated by implementing Mitigation Measure C-2a; however, the impact would still be considered significant (Class I) (See Section D.7).

Mitigation Measures for Impact C-3: Construction of the project would cause an adverse change to unknown significant buried prehistoric and historical archaeological sites or buried Native American human remains

C-1c Develop and implement Historic Properties Treatment Plan.

C-1d Conduct data recovery to reduce adverse effects.

C-1f Train construction personnel.

C-2a Properly treat human remains.

C-3a Monitor construction in areas of high sensitivity for buried resources.

Impact C-4: Construction of the project would cause an adverse change to Traditional Cultural Properties (Class I or II)

To date, no TCPs have been identified within the SDCPP area. A pre-construction Sacred Lands File search would need to be conducted and completed in order to note whether lands sacred to Native Americans are present in the vicinity of SDCPP. As explained in Section D.7.9, when properly coordinated with Native Americans or other traditional groups, mitigation could be developed that can reduce the impact to less than significant (Class II), but in some cases impacts to TCPs would remain significant (Class I). Implementation of mitigation measure C-4a (Complete Consultation with Native Americans and other Traditional Groups) is required; this consultation may reduce impacts to TCPs to a level that is less than significant (Class I or II).

Mitigation Measure for Impact C-4: Construction of the project would cause an adverse change to Traditional Cultural Properties

C-4a Complete consultation with Native American and other Traditional Groups.

Impact PAL-1: Construction of the project ~~could~~ would destroy or disturb significant paleontological resources (Class II)

Paleontological resources, including an undetermined number of fossil remains and unrecorded fossil sites, associated specimen data and corresponding geologic and geographic site data, and the fossil-bearing strata, could be adversely affected by direct environmental impacts resulting from ground disturbance and earth moving associated with construction of the SDCPP. Trenching; augering for concrete pilings and the foundations, installation of electrical towers or poles, and other earth-moving activity could disturb previously undisturbed fossiliferous sediments, which would compromise the scientific value of the paleontological resources affected. Although earth moving associated with construction of SDCPP site would be a comparatively short-term activity, the loss of fossil remains, unrecorded fossil sites, associated specimen data and corresponding geologic and geographic site data, and the fossil-bearing strata would be a significant and adverse environmental impact.

Because construction of the SDCPP may have potential adverse impacts on significant paleontological resources, the following mitigation measures would be required to reduce the adverse effects to a less than significant level (Class II)

Mitigation Measures for Impact PAL-1: Construction of the project ~~could~~ would destroy or disturb significant paleontological resources

PAL-1a Inventory and evaluate paleontological resources.

PAL-1b Develop Paleontological Monitoring and Mitigation Plan.

PAL-1c Monitor construction for paleontology.

PAL-1d Conduct paleontological data recovery.

PAL-1e Train construction personnel.

Cultural and Paleontological Operational Impacts for SDCPP

There are no known historic properties that would be directly or indirectly impacted by the SDCPP, nor are there known historic built environment resources within 0.5 miles of the SDCPP that would be subject to indirect visual impacts.

Impact C-5: Project operation and maintenance would cause an adverse change to known historic properties (Class II)

Direct and indirect impacts may occur to historic properties within and in the vicinity of the project area during operation and long-term presence of the substation. Direct impacts could result from maintenance or repair activities, while increased erosion could result as an indirect project impact. These impacts are potentially significant, but can be mitigated to a level that is less than significant (Class II) by implementing site protection measures and monitoring procedures, as detailed in Mitigation Measure C-5a (Protect and monitor NRHP and/or CRHR-eligible properties), as well as Implementation of mitigation measures C-2a (Properly treat human remains) and C-4a (Complete Consultation with Native Americans and other Traditional Groups).

Mitigation Measures for Impact C-5: Project operation and maintenance would cause an adverse change to known historic properties

C-1b Avoid and protect potentially significant resources.

C-1c Develop and implement Historic Properties Treatment Plan.

C-2a Properly treat human remains.

C-4a Complete consultation with Native American and other Traditional Groups.

C-5a Protect and monitor NRHP and/or CRHR-eligible properties.

Cultural and Paleontological Resources for Peakers

Cultural and Paleontological Setting for Peakers

Miramar Energy Facility. The Miramar II Peaker would be constructed adjacent to the existing Miramar Energy Facility. The Miramar Energy Facility is 1.5 acres and is graded and paved adjacent to railroad tracks. One hundred percent of the existing Miramar Energy Facility property has been previously surveyed for cultural resources. These surveys, however, were conducted more than five years ago, and a pre-construction survey is recommended. Previous surveys did not identify any cultural resources within study area for the Miramar II Peaker. There is, however, the potential to encounter undiscovered cultural resources during project construction.

According to geologic mapping by Kennedy (1975), the Miramar Energy Facility site is underlain by the Lindavista Formation of early Pleistocene age (1.5 million years ago to 500,000 years ago). The Lindavista Formation is composed of reddish-brown interbedded sandstone and conglomerate with a hematite cement. It consists of both near-shore marine and non-marine facies up to 30 feet thick and has yielded sparse mostly marine invertebrate specimens, and remains of sharks and baleen whales. The Lindavista Formation is determined to have a moderate potential for paleontological resources.

Pala Substation. The Pala Peaker would be constructed adjacent to the existing Pala Substation. The existing Pala Substation is located on 15 acres of mildly sloping land. A portion of the site proposed for development includes an existing orchard and a fenced in area with a few small structures. Two cultural

resources were identified within the Pala Substation area; however, neither has national registration status, designation or recommendation due to insufficient data.

According to geologic mapping by Kennedy (2000), the Pala Substation site is underlain by Quaternary very old alluvial fan deposits of early Pleistocene age (1.8 million years ago to 780,000 years ago). Quaternary very old alluvial fan deposits are composed of reddish brown, mostly very well indurated and moderately to well dissected sand and cobble that may be capped with moderate to well developed pedogenic soils. Fossil localities in older alluvium deposits throughout southern California have yielded terrestrial vertebrates such as mammoths, mastodons, ground sloths, dire wolves, short-faced bears, saber-toothed cats, horses, camels, and bison. This geologic unit is determined to have a high potential for paleontological resources.

Margarita Substation. The Margarita Peaker would be located adjacent to the existing Margarita Substation. The existing Margarita Substation is located on 3.0 acres of undeveloped land. The undeveloped portion of the substation is fairly steeply sloping land that appears to be situated on a concrete pad. This property is immediately surrounded by another concrete pad and undeveloped or agricultural land on the outskirts of Ladera Ranch. A cultural resources records search was conducted for the Margarita Substation at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton. No portion of the Margarita Substation has been surveyed for cultural resources within the last 10 years; however, one cultural resource (CA-ORA-883/1335), a lithic scatter, was identified within the substation area. The site has been subjected to a formal data recovery program and mitigation for a road project, but it is possible that portions of the site retain adequate data potential for NRHP or CRHR eligibility.

According to geologic mapping by Morton and Miller (1981), the Margarita Substation site is underlain by the Monterey Formation of middle Miocene age (15 to 10 million years ago). The Monterey Formation is a deep marine deposit composed primarily of thinly bedded diatomaceous, silty and siliceous shale and siltstone, interbedded with sandstone and minor inclusions of chert and limestone, and is approximately 365 to 460 meters (1,200 to 1,500 feet) thick (Morton et al., 1974, Edgington, 1974). Monterey Formation is one of the most prolific fossil-producing rock units in California. Numerous invertebrate, fish and marine mammal fossils have been recovered from the Monterey Formation in Orange County. Abundant invertebrate and vertebrate fossils have been recovered from limestone deposits such as Pecten Reef, occurring at the base of the formation in Orange County (Fife, 1979). Coprolites, algae, plants, foraminifera, diatoms, mollusks, ostracods, sharks, rays, fish, marine mammals, turtles, crocodiles, and terrestrial vertebrates are known from this formation (Fife, 1979; Lander, 1988; Howard, 1978; Raschke, 1984; Roeder, 1980). This geologic unit is determined to have a very high potential for paleontological resources.

Borrego Springs Substation. The existing Borrego Springs Substation site includes 2 acres of graded but undeveloped desert land. A cultural resources records search was conducted for the entire 2-acre substation site and a 0.5-mile radius around it. One cultural resource, a prehistoric habitation site (CA-SDI-2366) that is potentially eligible for NRHP or CRHR inclusion, was identified within the Borrego Springs Substation.

According to geologic mapping by Weber (1959), the Borrego Springs Substation is underlain by Quaternary alluvium of Pleistocene and Holocene age. Quaternary alluvium consists of partly dissected, mostly unconsolidated, poorly sorted sand, silt, clay, and gravel located at the margins of canyons and within valley floors. “Younger” alluvium is Holocene (10,000 years ago to Recent) in age and “Older alluvium” is Pleistocene (1.8 million years ago to 10,000 years ago) in age. Fossil localities in older allu-

vium deposits throughout southern California have yielded terrestrial vertebrates such as mammoths, mastodons, ground sloths, dire wolves, short-faced bears, saber-toothed cats, horses, camels, and bison. Younger alluvium is determined to have a low potential for paleontological resources but is often underlain by older alluvium, which is determined to have a high potential for paleontological resources.

Environmental Impacts and Mitigation Measures

Cultural and Paleontological Construction Impacts for Peakers

There are four (4) known cultural resources are located within three of the four peaker plant vicinities. There is also the potential to encounter undiscovered cultural resources during project construction, although this potential is limited due to the developed nature of the peaker plant sites. Because of this the following impacts could occur. Please see Appendix 12 for the full text of the Cultural and Paleontological Mitigation Measures. The four resources are presented in Table Ap.9B-111, 9B-112, and 9B-113 in Appendix 9.

There are no known sites in the four peaker plants that contain Native American human remains, so therefore Impact C-2(Construction of the project would cause an adverse change to sites known to contain human remains) would not occur.

Impact C-1: Construction of the project ~~could~~ would cause an adverse change to known historic properties (Class II)

The various peaker power plant sites contain four known archaeological or historical sites. Mitigation similar to that for the Proposed Project would be appropriate to ensure that any adverse construction impacts would be mitigated to a level that is less than significant (Class II).

C-1a **Inventory and evaluate cultural resources in Final APE.**

C-1b **Avoid and protect potentially significant resources.**

C-1c **Develop and implement Historic Properties Treatment Plan.**

C-1d **Conduct data recovery to reduce adverse effects.**

C-1e **Monitor construction at known ESAs.**

C-1f **Train construction personnel.**

Impact C-3: Construction of the project would cause an adverse change to unknown significant buried prehistoric and historical archaeological sites or buried Native American human remains (Class I or II)

Types of cultural resources that could be encountered along the Miramar Energy Facility property, along the Pala Substation property, along the Margarita Substation property, or along the Borrego Substation property include prehistoric resources such as buried living surfaces, trash deposits, hearths, and cremations. Historical resources that could be unearthed during project construction include refuse pits and privies. Buried archaeological resources may be encountered during preparations and grading of laydown and parking areas, along with grading and construction of the peaker plants. Impacts to most unknown significant prehistoric and historic archaeological sites would be mitigated to a level that is less than significant (Class II) by implementing Mitigation Measures C1-a, C-1b, C-1c, C-1d, C-1f, C-2a and C-3a. However, effects related to Native American human remains, if found, would be significant (Class I) even with mitigation (see Section D.7).

Mitigation Measures for Impact C-3: Construction of the project would cause an adverse change to unknown significant buried prehistoric and historical archaeological sites or buried Native American human remains

C-1a Inventory and evaluate cultural resources in Final APE. Sections

C-1b Avoid and protect potentially significant resources.

C-1c Develop and implement Historic Properties Treatment Plan.

C-1d Conduct data recovery to reduce adverse effects.

C-1f Train construction personnel.

C-2a Properly treat human remains.

C-3a Monitor construction in areas of high sensitivity for buried resources.

Impact C-4: Construction of the project would cause an adverse change to Traditional Cultural Properties (Class I or II)

To date, no TCPs have been identified at the four peaker sites. A Sacred Lands File search would need to be conducted and completed in order to note whether lands sacred to Native Americans are present in the vicinity of the four sites. As explained in Section D.7.9, when properly coordinated with Native Americans or other traditional groups, mitigation could be developed that can reduce the impact to less than significant (Class II), but in some cases impacts to TCPs would remain significant (Class I). Implementation of mitigation measure C-4a (Complete Consultation with Native Americans and other Traditional Groups) is required; this consultation may reduce impacts to TCPs to a level that is less than significant (Class I or II).

Mitigation Measure for Impact C-4: Construction of the project would cause an adverse change to Traditional Cultural Properties

C-4a Complete consultation with Native American and other Traditional Groups.

Cultural and Paleontological Operational Impacts for Peakers

No long-term indirect impacts to historic built environment resources have been identified for the peaker project areas (Impact C-6). However, because direct and indirect impacts would occur to historic properties, specifically resources eligible or listed on the NRHP, Impact C-5 is presented below.

Impact C-5: Project operation and maintenance would cause an adverse change to known historic properties (Class II)

Direct and indirect impacts would occur to historic properties within and in the vicinity of the peaker project areas during operation and long-term presence of the Proposed Project. Direct impacts would result from maintenance or repair activities, while increased erosion would result as an indirect project impact. These impacts are significant, but would be mitigated to a level that is less than significant (Class II) by implementing site protection measures and monitoring procedures, as detailed in Mitigation Measure C-5a (Protect and monitor NRHP and/or CRHR-eligible properties), as well as Implementation of mitigation measures C-2a (Properly treat human remains) and C-4a (Complete consultation with Native Americans and other traditional groups). These measures would protect register-eligible properties from impacts after construction of the Proposed Project.

Mitigation Measures for Impact C-5: Project operation and maintenance would cause an adverse change to known historic properties

C-1b Avoid and protect potentially significant resources.

C-1c Develop and implement Historic Properties Treatment Plan.

C-2a Properly treat human remains.

C-4a Complete consultation with Native American and other Traditional Groups.

C-5a Protect and monitor NRHP and/or CRHR-eligible properties.

Overall Cultural and Paleontological Impacts of the New In-Area All-Source Generation Alternative

Conventional Generation

No known historic properties are likely to be affected by the construction of the power plant or peakers; however, mitigation similar to that for the Proposed Project would be appropriate to ensure that any adverse construction impacts would be mitigated to a level that is less than significant (Class II). It is possible that subsurface construction of the power plants or peakers could encounter historical resources or buried archaeological remains including human remains. Mitigation shall be implemented to ensure that any adverse effect to human remains is avoided, but the impacts would still be considered significant and unavoidable (Class I). To date, no TCPs have been identified at the power plant and peaker sites or along the routes of linear facilities. Mitigation measures may reduce impacts to TCPs to a level that is less than significant (Class I or II).

Paleontological resources could be adversely affected by direct environmental impacts resulting from ground disturbance and earth moving associated with construction of the power plants and peakers. Because construction of the plants may have potential adverse impacts on significant paleontological resources, mitigation measures would be required to reduce the adverse effects to a less than significant level (Class II).

Operation of the power plant and peakers would result in no cultural or paleontological impacts.

Renewable Generation

For overall impacts of the New In-Area Renewable Generation, please see Section E.5 (Solar PV, Biomass/ Biogas and Wind components).

E.6.8 Noise

Noise for SBRP

Noise Setting for SBRP

Ambient Noise Levels. Current sources of environmental noise in the vicinity of the SBRP site include the existing SBPP facility, I-5 freeway, and other transportation-related sources. The transportation-related noise is dominated by heavy vehicle flows on I-5, as well as significant arterial traffic on Bay Boulevard, Palomar Street, Industrial Boulevard, and L Street. There is also significant community noise from the rail lines immediately east of Industrial Boulevard which serve both light-rail, trolley cars and heavy, freight rail operations. Aircraft noise influences from commercial, military, general-aviation, and helicopters also affects the site. For areas in Chula Vista just east of the I-5 freeway, the environment is dominated by the proximity of the freeway, major arterial roadways, and a busy rail line. Typical noise levels in industrial areas with these land uses range from 60 to 80 dBA, depending on the proximity to sources.

Noise-Sensitive Receptors. The majority of adjacent receptor areas are in the Chula Vista city limits with receptors are to the north, northeast, east, southeast, and south of the project site. North of the existing power plant, across the channel running east-west along the extension of J Street, lies Chula Vista Marina View Park and the Chula Vista Harbor and Marina. Farther to the east, beyond the I-5 freeway is a mobile home trailer park (Brentwood Park approximately 1,500 feet from the site), single-family residential areas (approximately 2,100 feet from the site), and several multi-family complexes north of L Street and east of the trolley rail line (approximately 3,000 feet from the site). The closest school is the Harborside Elementary School at the northeast corner of Naples Street and Industrial Boulevard (with a small, vacant buffer zone between the railroad tracks and the actual school fence-line). Section E.6.2 discusses any noise impact to wildlife.

Noise Standards for SBRP. The main requirements of the Chula Vista Noise Ordinance are found in Chula Vista Municipal Code, Title 19, Chapter 19.68.030, which prohibits noise affecting residential uses over 55 Ldn. Additional noise provisions for construction-related activities are found in Sections 19.68.060 and 17.24.050, paragraph J, which prohibits construction noise between the hours of 10:00 p.m. and 7:00 a.m., Monday through Friday, and between the hours of 10:00 p.m. and 8:00 a.m., Saturday and Sunday. The SBRP would be located on land within the Port of San Diego, which is a distinct and separate entity, and may apply the Chula Vista noise levels as guidance or otherwise, or may choose to enact other standards for the lands under its control. As part of the Chula Vista Bay Front Master Plan, the Port does not currently have specific noise level limits. A noise level of 65 dBA CNEL or Ldn at the property line of the SBRP would preserve compatibility with possible future uses that may be developed under the Bay Front Master Plan.

Noise Construction Impacts for SBRP

Section D.8.4.1 includes a discussion of significance criteria and mitigation measures for impacts related to noise. Noise-sensitive locations are not immediately adjacent to SBRP, and would not be affected by construction-related groundborne vibration. As such, vibration impacts would not occur (Impact N-2, No Impact).

Impact N-1: Construction noise would substantially disturb sensitive receptors and violate local rules, standards, and/or ordinances (Class III)

Construction activities on the industrial site would be typical of other power plants in terms of schedule, equipment used, and other types of activities. The SBRP construction schedule is anticipated to be approximately 25 months in duration, but there will be earlier activities associated with SBRP site preparation. Construction noise levels from use of heavy construction equipment and construction-related traffic would vary during the different activity periods, depending upon the activity location(s) and the number and types of equipment being used. Maximum intermittent noise levels would range from 80 to 90 dBA at 50 feet from a work site. The noise-sensitive land use nearest to the SBRP site is approximately 1,500 feet from the site, across the highway. Because of sufficient distance and the intervening noise source of the highway, which would screen the noise generated at SBRP, the impact at nearby noise-sensitive receptors would be adverse but less than significant (Class III).

Noise Operational Impacts for SBRP

Impact N-3: Permanent noise levels would increase due to corona noise from operation of the transmission lines and noise from other project components(Class II)

Commissioning and initial power plant start-up activities and related operations would generate significant noise. Commissioning of SBRP would involve steam blow line cleaning, which creates loud bursts of continuous or near-continuous noise over the duration of a few weeks for commissioning. Power plant operators can silence the noise from steam blows to reduce the noise in the community. The vent silencers can involve a passive device like a muffler or a water column. Although these potential annoyances would be short-term and experienced intermittently during commissioning and initial start-up, a substantial noise increase would occur. This would be a significant impact. Mitigation would be required (Mitigation Measure N-3c, Silence noise from steam blows) to ensure that commissioning noise is managed to avoid nuisances and is reduced to less than significant levels (Class II).

Corona noise from energized transmission lines is a concern with transmission lines over 230 kV. The SBRP, however, would only involve transmission lines at 230 kV, 138 kV, and 69 kV. As such, substantial transmission line corona noise would not occur in the vicinity of SBRP, resulting in a less than significant impact (Class III).

The new combined-cycle plant would be partially enclosed. That is, the turbines (gas and steam) would be inside of an L-shaped turbine building. This building could serve as an aesthetic feature for the plant, but also provide acoustical benefits in substantially containing the turbine, generator, and related equipment noise. The air cooled condenser, combustion turbine generator package, the cooling water heat exchanger, and the fuel gas compressors would cause substantial noise increases at off-site locations if noise reduction features are not included. This would be a significant impact. Incorporating the following mitigation measures (Mitigation Measures N-3d and N-3e) would require noise reduction features to reduce the permanent noise impacts associated with power plant operation to a less than significant level (Class II).

Mitigation Measures for Impact N-3: Permanent noise levels would increase due to corona noise from operation of the transmission lines and noise from other project components

N-3c **Silence noise from steam blows during power plant commissioning.** Temporary silencers on air and steam discharge vents shall be used during air and steam blow cleaning in the commissioning and start-up phases. Silencers shall be designed to achieve noise levels below 45 dBA at the nearest residential receptor.

N-3d **Incorporate noise reduction features with power plant design.** Power plant design and implementation shall include noise reduction and control design features to ensure that operation of the project will meet the noise levels established by the local jurisdictions, while accounting for ambient noise conditions. The design shall ensure that routine operation of the power plant does not exceed the existing nighttime background noise level at any of the closest noise-sensitive receptors by more than 5 dB.

N-3e **Verify proper power plant noise control.** A noise survey shall be performed within 90 days of the startup of commercial operations to confirm that the modeled noise levels are met. Any deficiencies shall be noted, and a schedule to correct them shall be developed. The survey shall be used to confirm that routine operation of the power plant does not exceed the existing nighttime background noise level at any of the closest noise-sensitive receptors by more than 5 dB.

Impact N-4: Routine inspection and maintenance activities would increase ambient noise levels (Class I)

Periodic maintenance of SBRP, including occasional emergency repairs, would cause increased noise. Because maintenance activities would sometimes involve noise at levels identical to power plant construction, maintenance would periodically cause a substantial increase, which would be a significant and unavoidable impact (Class I).

Noise for SDCPP

Noise Setting for SDCPP

Ambient Noise Levels. The existing noise environment at the SDCPP site is dominated by overhead air traffic related to MCAS Miramar and operations of the Padre Dam and the Padre Dam Sewage Treatment Facility. Noise levels are low in the absence of MCAS Miramar air traffic because of the open space at the site; absent air traffic, natural noise levels are expected to be as low as 35 to 50 dBA.

Noise-Sensitive Receptors. The SDCPP site is primarily open space with ridges and valleys with riparian corridors, but approximately 1,400 feet from the southeast border of the SDCPP site is a residential community. Additionally, the City of Santee has approved the development of 1,380 homes on land east of the SDCPP site (the Fanita Ranch development). Residences along Strathmore Drive and the camping area at the north end of Santee Lakes would have a relatively unobstructed line-of-sight which provides minimal noise attenuation over the distance. These residences would be protected by the San Diego County policies and regulations for noise protection and the City of Santee noise ordinance.

Noise Standards for SDCPP. City of Santee Municipal Code. Construction limitations in the City of Santee Municipal Code (Section 8.12.290) are similar to those of the San Diego Municipal Code (Section D.8.3.3), except the 75 dBA limitation applies to construction over any 8-hour period. Construction noise must be limited to daytime hours between 7:00 a.m. and 7:00 p.m., Monday through Saturday. Activity in the City of Santee would need to comply with Chapter 8.12 of the Municipal Code (noise abatement and control) by adhering to appropriate construction times during daylight hours.

See Section D.8.3.3 for the noise ordinances and limitations within unincorporated San Diego County.

Noise Construction Impacts for SDCPP

Section D.8.4 includes a detailed discussion of significance criteria, impacts, and mitigation measures related to noise. Noise-sensitive locations are not immediately adjacent to SDCPP, and would not be affected by construction-related groundborne vibration. As such, vibration impacts would not occur (Impact N-2, No Impact).

Impact N-1: Construction noise would substantially disturb sensitive receptors and violate local rules, standards, and/or ordinances (Class I)

Construction of the SDCPP would cause increased noise. Noise levels would vary depending on the construction activities and locations. Construction noise impacts would persist for the two-year duration of construction activity. The closest noise-sensitive receptors would be approximately 1,400 feet to the southeast, and these locations would be affected by construction noise from the project site. Noise impact from construction transportation routes would be adverse but buffered by distance and existing noise from Fanita Parkway. The noise impacts include operation of heavy construction equipment, transportation of construction workers and equipment, as well as grading and other preparation of the site and linear facilities. The major roads that would be impacted by construction-related traffic are SR52, Mast Boulevard, Fanita Parkway, and Santee Lakes Boulevard. Construction of natural gas, water supply, wastewater, and transmission lines linear facilities would result in temporary noise impacts from trenching and excavation. Maximum intermittent noise levels would range from 80 to 90 dBA at 50 feet from the project site and would be lower at the nearest residences. Although the nearest noise-sensitive receptors to the SDCPP site would be at distances of approximately 1,400 feet, construction traffic and construction activities related to linear facilities sites would substantially increase noise at residences near SDCPP, which would be a significant impact. To ensure temporary construction noise would be reduced to the extent feasible, and to comply with all applicable local noise ordinances and regulations, Mitigation Measures L-1a and N-1a would be required. These measures would be required to reduce this impact to the extent feasible, but the substantial noise increase from construction would be significant and unavoidable (Class I). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measures for Impact N-1: Construction noise would substantially disturb sensitive receptors and violate local rules, standards, and/or ordinances

L-1a **Prepare Construction Notification Plan.**

N-1a **Implement Best Management Practices for construction noise.**

Noise Operational Impacts for SDCPP

Impact N-3: Permanent noise levels would increase due to corona noise from operation of the transmission lines and noise from other project components (Class II)

Commissioning and initial power plant start-up activities and related operations would generate significant noise. Annoyances during commissioning would cause a substantial noise increase that would result in a significant impact. Mitigation would be required to ensure that commissioning noise is managed to avoid nuisances (Mitigation Measure N-3c). Substantial changes in transmission line corona noise would not occur. Mitigation would also be needed to ensure that design of the power plant includes sufficient noise reduction features to avoid substantial noise increases at the nearest receptors (Mitigation Measures N-3d and N-3e). Incorporating the following mitigation measures would reduce the permanent noise impacts associated with power plant operation to a less than significant level (Class II).

Mitigation Measure for Impact N-3: Permanent noise levels would increase due to corona noise from operation of the transmission lines and noise from other project components

N-3c Silence noise from steam blows during power plant commissioning.

N-3d Incorporate noise reduction features with power plant design.

N-3e Verify proper power plant noise control.

Impact N-4: Routine inspection and maintenance activities would increase ambient noise levels (Class I)

Periodic maintenance activities, including occasional emergency repairs, at SDCPP would generate intermittent noise. Because maintenance activities would sometimes involve noise at levels identical to power plant construction, maintenance would periodically cause a substantial increase, which would be a significant and unavoidable impact (Class I)

Noise for Peakers

Noise Setting for Peakers

The existing noise environment at the peaker power plant locations is typically influenced by existing surrounding land uses, transmission equipment, corona discharge noise from nearby transmission lines, and in many cases vehicle traffic from surrounding streets. Section E.6.4 includes a discussion of land uses in the area.

Miramar Energy Facility. The Miramar Energy Facility and activities at the Miramar Marine Corps Air Station generate ambient noise in the area. Noise levels are low to moderate in the absence of MCAS Miramar air traffic because of industrial use of the site; absent air traffic, typical noise levels are expected to range from 60 to 80 dBA In addition, nearby rail activities along the Atchison, Topeka, and Santa Fe rail line generate noise in the substation area. The potential power plant site is located within San Diego County and is subject to all applicable noise regulations designated by San Diego County (Section D.8.3.3). There are no sensitive receptors within 1,000 feet of the project site.

Pala Substation. The Pala Substation site is located within San Diego County and is subject to all applicable noise regulations designated by the San Diego County (Section D.8.3.3). Noise levels are low at this undeveloped site, ranging from 35 to 50 dBA, with noise levels approaching 60 dBA near the existing substation. The Pala site is more than 1,000 feet from the nearest noise-sensitive residential use.

Margarita Substation. The Margarita site is located within Orange County and is subject to all applicable noise regulations designated by Orange County. In Division 6 of the Orange County Codified Ordinance, construction noise limitations prohibit activity between 8 p.m. and 7 a.m. on Mondays through Saturdays and any time on Sundays or holidays. Noise levels are low at this undeveloped site, ranging from 35 to 50 dBA, with noise levels approaching 60 dBA near the existing substation. The site is approximately 1,000 feet from the nearest noise-sensitive residential uses.

Borrego Springs Substation. The Borrego Springs site is located within San Diego County and is subject to all applicable noise regulations designated by San Diego County (Section D.8.3.3). Noise levels are low at this undeveloped site, ranging from 35 to 50 dBA, with noise levels approaching 60 dBA near the existing substation. The site is approximately 1,000 feet from the nearest noise-sensitive residential uses.

Noise Construction Impacts for Peakers

Section D.8.4 includes a detailed discussion of significance criteria, impacts, and mitigation measures related to noise. Noise-sensitive locations are not immediately adjacent to peaker power plant sites, and would not be affected by construction-related groundborne vibration. As such, vibration impacts would not occur (Impact N-2, No Impact).

Impact N-1: Construction noise would substantially disturb sensitive receptors and violate local rules, standards, and/or ordinances (Class I)

Construction activities for peaker generators would generate noise associated with the use of heavy construction equipment and construction-related traffic during the construction period. Noise would occur from building the required utility connections (water, sewer, natural gas), which involves trenching and excavating. Maximum intermittent noise levels would range from 80 to 90 dBA at 50 feet from a work site. Although the nearest noise-sensitive receptors would be at distances of approximately 1,000 feet, construction of access roads and construction activities at the peaker sites would substantially increase noise, which would be a significant impact. To ensure temporary construction noise would be reduced to the extent feasible, and to comply with all applicable local noise ordinances and regulations, Mitigation Measures L-1a and N-1a would be required. These measures would be required to reduce this impact to the extent feasible, but the substantial noise increase from construction would be significant and unavoidable (Class I).

Mitigation Measures for Impact N-1: Construction noise would substantially disturb sensitive receptors and violate local rules, standards, and/or ordinances

L-1a **Prepare Construction Notification Plan.**

N-1a **Implement Best Management Practices for construction noise.**

Noise Operational Impacts for Peakers

Impact N-3: Permanent noise levels would increase due to corona noise from operation of the transmission lines and noise from other project components (Class II)

The permanent noise impacts that would occur as a result of the peakers would be associated with three types of noise: noise from the new substation facilities, the corona effect of any new transmission lines, and noise from activities for routine operation, inspection, and maintenance of the new facilities. Peaker power plants would not involve steam systems like a combined cycle facility, so steam blows would not occur. Peaker units would generally produce a maximum steady sound level of about 85 dBA on-site, which is the level allowed by worker-safety requirements. At the nearest noise-sensitive locations, a substantial noise increase would occur, and the impact would be significant.

Corona noise would occur along any new energized transmission line connected to the peakers, but this would only result in an impact in areas which are in close proximity to sensitive receptors resulting in ambient noise levels greater than the noise occurring under existing conditions. With the peakers served by voltages less than 230 kV, substantial noise impacts would not be associated with corona discharge or substation operation.

Incorporating the following mitigation measures would reduce the permanent operational noise impacts associated with peaker power plant operation to a less than significant level (Class II).

Mitigation Measure for Impact N-3: Permanent noise levels would increase due to corona noise from operation of the transmission lines and noise from other project components

N-3d Incorporate noise reduction features with power plant design.

N-3e Verify proper power plant noise control.

Impact N-4: Routine inspection and maintenance activities would increase ambient noise levels (Class I)

Periodic maintenance activities, including occasional emergency repairs, at the facilities would generate intermittent noise. Because maintenance activities would sometimes involve noise at levels identical to power plant construction, maintenance would periodically cause a substantial increase, which would be a significant and unavoidable impact (Class I).

Overall Noise Impacts of the New In-Area All-Source Generation Alternative

Conventional Generation

For power plant and peaker development under the New In-Area All-Source Generation Alternative, noise impacts associated with the use of heavy construction equipment and construction-related traffic (Impact N-1) would either be less than significant or significant and unavoidable, requiring with Mitigation Measures L-1a and N-1a, depending on the proximity of the power plant to noise-sensitive receptors (Class I).

Operational noise impacts (Impact N-3) from power plants and peakers under this alternative would require the mitigation to reduce the permanent noise impacts to a less than significant level (Class II). A significant and unavoidable noise increase would occur during periodic maintenance activities at power plants and peakers (Impact N-4, Class I).

Renewable Generation

For overall impacts of the New In-Area Renewable Generation, please see Section E.5 Solar PV, Biomass/Biogas and Wind components.

E.6.9 Transportation and Traffic

Transportation and Traffic for SBRP

Transportation and Traffic Setting for SBRP

The SBRP site would be northwest of the intersection of Palomar Street and Bay Boulevard in Chula Vista. Interstate 5 (I-5) is the only controlled-access facility serving the area. Palomar Street is a four-lane roadway west of I-5 and a six-lane roadway east of I-5. This east-west roadway connects the SBRP site to I-5, Orange Avenue, I-805 and communities to the east of the SBRP site. J Street is an east-west four-lane roadway north of the existing energy facility property and the proposed SBRP site. This roadway connects Bay Boulevard to I-5 and communities to the east of the SBRP site. Bay Boulevard is a north-south roadway east of the existing energy facility property and the SBRP site. This roadway provides direct access to the SBRP site and connects to Palomar Street, L Street, J Street, as well as communities to the south and north. Table E.6.9-1 lists affected roadways.

Table E.6.9-1. Public Roadways Near Non-Wires Alternatives – South Bay Replacement Plant

Roadway	Jurisdiction	Classification	Existing Lanes	Traffic Volumes		Project Component
				Year	ADT	
State and County Facilities						
Interstate 5 (Bay/Industrial to Palomar St.)	Caltrans	Freeway	4	2004	161000	none
Interstate 5 Bay Blvd off Ramp	Caltrans	Freeway	NA	2004	8500	none
Interstate 5 Bay Blvd on Ramp	Caltrans	Freeway	NA	2004	3850	none
Interstate 5 Palomar St off Ramp	Caltrans	Freeway	NA	2004	8000	none
Interstate 5 Palomar St on Ramp	Caltrans	Freeway	NA	2004	9200	none
Local Roadways						
Palomar Street (Bay Blvd to I-5)	San Diego County	Class I collector	4	2004	4800	none
Palomar Street (I-5 to Industrial Blvd)	San Diego County	Arterial	6	2004	35360	none
Bay Blvd (Palomar St to SB 1-5 ramps)	San Diego County	Class II collector	2	2004	6830	none
Bay Blvd (SB I-5 ramps to L St.)	San Diego County	Class II collector	2	2004	11986	none

* Source: SBRP AFC, 2006

The City of Chula Vista requires a permit before operating any oversized vehicles within the city. The project will comply with the "Transportation Permit" requirements by obtaining the permit from the City of Chula Vista Engineering Department before operating any oversized vehicles within the city. The City of Chula Vista Municipal Code Chapter 10.64 establishes truck routes and load limitations for the city roads identified within the project area. The movement of all motor vehicles having a maximum gross weight in excess of 10,000 pounds is confined to the following streets in the vicinity of SBRP: Palomar Street from Bay Boulevard to Third Avenue, L Street from Bay Boulevard to Hilltop Drive, J Street from Bay Boulevard to Broadway, Bay Boulevard from E Street to south city limits, Industrial Boulevard from L Street to Main Street.

Transportation and Traffic Construction Impacts for SBRP

Development of any power plant project could substantially affect the ground transportation system during construction. The primary impact during power plant construction would be traffic due to mobilizing a large workforce and delivering large equipment. For development of linear facilities serving the power plants, installation of towers and the stringing of conductors would interface with the public roadway systems requiring temporary closures. Underground linear facilities, including natural gas pipelines and water lines would involve construction activities that would also affect the transportation system, such as trenching, storage, or transport of trench spoils; transport and storage of construction materials; and repaving of paved roadways. These impacts are discussed below.

Impact T-1: Construction would cause temporary road and lane closures that would temporarily disrupt traffic flow (Class II)

Delivery of large equipment and materials via truck would potentially require temporary closures along Bay Boulevard. Temporary closures of this nature would likely occur for a limited time (few minutes to an hour). Prior to conducting work within or above a road ROW, an encroachment permit or similar authorization would be required by the applicable jurisdictional agency at locations where the construction activities would occur within or above the public road ROW. Encroachment permits would restrict road closures to off-peak periods to avoid excessive traffic congestion, where necessary. Additionally, encroachment permits require preparation of detour routes to minimize traffic delays and/or congestion. Implementation of mitigation measure T-1a (Restrict lane closures) would reduce this impact to a less than significant level (Class II) because traffic management plans (TMP) would be developed which would describe alternative routes avoiding construction zones. The full text of the mitigation measures appears in Appendix 12.

Mitigation Measure for Impact T-1: Construction would cause temporary road and lane closures that would temporarily disrupt traffic flow

T-1a Restrict lane closures.

Impact T-2: Construction would temporarily disrupt the operation of emergency service providers (Class II)

Construction activities, if blocking roadways for short periods of time, could potentially interfere with emergency response by ambulance, fire, paramedic, and police vehicles. There is a possibility that emergency services would be needed at a location where access is temporarily blocked by the construction zone. Mitigation measure T-2b, coordination in advance with emergency service providers in order to develop alternative routes for emergency vehicles and adjust service areas and destinations as necessary to maintain emergency service coverage and response times, would reduce this impact to a less than significant level (Class II).

Mitigation Measure for Impact T-2: Construction would temporarily disrupt the operation of emergency service providers

T-2b Coordinate with Emergency Service Providers.

Impact T-3: Construction would temporarily disrupt bus transit services (Class II)

Construction activities could potentially affect bus or transit operations near SBRP. Public transportation in the area is provided by Chula Vista Transit and San Diego Trolley, Inc. The Chula Vista Bus Routes 701, 702, 703, and 712 and the San Diego Trolley Blue Line operate in the vicinity of the SBRP site.

In addition, school bus routes could be affected by construction activities. Mitigation measure T-3b, to consult with school districts and transit service providers prior to construction to develop alternative routes and/or bus stops avoiding the construction zone, would reduce this impact to a less than significant level (Class II) because bus and transit operations would not be disrupted.

Mitigation Measure for Impact T-3: Construction would temporarily disrupt bus transit services

T-3b Consult with bus and transit services.

Impact T-4: Construction would temporarily disrupt pedestrian and/or bicycle movement and safety (Class II)

Pedestrian and bicycle circulation could be affected by power plant construction activities or construction of linear facilities if pedestrians and bicyclists were unable to pass through the construction zone or if established pedestrian and bike routes were blocked. There are existing bike routes along Bay Boulevard and along Palomar Street. Implementation of mitigation measure T-4a (Ensure pedestrian and bicycle circulation and safety) would reduce this impact to a less than significant level (Class II) because pedestrians and bicyclists would be able to move through the construction zone safely or alternative routes would be planned.

Mitigation Measure for Impact T-4: Construction would temporarily disrupt pedestrian and/or bicycle movement and safety

T-4a Ensure pedestrian and bicycle circulation and safety.

Impact T-5: Construction vehicles and equipment would cause physical damage to roads in the project area (Class II)

Construction activities involving work in roadways for the installation of linear facilities and especially underground facilities could cause physical damage to the roads. Construction activities could also result in impacts associated with physical damage to the roads that would provide access to the construction site. Additionally, there is potential for unexpected damage to occur on the roads by vehicles and heavy equipment. Mitigation measure T-5a would reduce this impact to an insignificant level (Class II) because all physically damaged roadways would be repaired to pre-construction conditions eliminated damaged to roadways.

Mitigation Measure for Impact T-5: Construction vehicles and equipment would cause physical damage to roads in the project area

T-5a Repair damaged roads.

Impact T-6: Construction activities would cause a temporary disruption to rail traffic or operations (Class III)

Construction activities could, but would not be expected to, interfere with rail traffic. The San Diego coastal region (including Chula Vista) and national railway systems are linked via the Burlington Northern Santa Fe (BNSF) and the San Diego and Imperial Valley (SDIV) railroads. Construction of linear facilities over or through a railroad ROW would temporarily affect rail operations. SBRP would be required to comply with permits for entering a railroad ROW. All requirements of the railroad encroachment permits, such as temporary protection shields for construction above or adjacent to railroad tracks, would reduce the effect of this impact to a less than significant level (Class III).

Impact T-7: Construction would result in the short-term elimination of parking spaces (Class II)

Construction activities could result in short-term elimination of parking spaces in the immediate vicinity of the power plant site and at staging areas. Implementation of County parking guidelines along County-maintained roadways as indicated in approved traffic control plans and Implementation of mitigation measure T-7a (Notify public of potential short-term elimination of parking spaces) would reduce this impact to a less than significant level (Class II) because alternative parking spaces would be provided where a loss of parking spaces would create a hardship as determined by the affected public agencies or similar measures.

Mitigation Measure for Impact T-7: Construction would result in the short-term elimination of parking spaces (Class II)

T-7a Notify public of potential short-term elimination of parking spaces.

Impact T-8: Construction would conflict with planned transportation projects (Class III)

Construction traffic associated with the SBRP would use numerous roadways/transportation corridors, including Palomar Street, Bay Boulevard, I-5, Orange Avenue, and J and L Streets. According to the AFC, the nearest planned transportation project to the SBRP construction site is along H Street. The public agencies that have jurisdiction over these roadways, Caltrans, City of Chula Vista, and San Diego County, would be notified of the SBRP project through the Notice of Preparation/Notice of Intent, and an encroachment permit or other such agreement which must be obtained for each location where the project would interface with a roadway or other transportation facility. Complying with local permits and agreements would ensure appropriate coordination between SBRP and the affected agencies so that conflicts would be avoided or minimized. The impacts would be less than significant (Class III), and no mitigation measures would be required because coordination with appropriate agencies would require plans and schedules to be submitted for approval prior to construction reducing any potential impacts.

Impact T-9: Construction would generate additional traffic on the regional and local roadways (Class II)

Construction worker commute trips, equipment deliveries, and hauling building materials to and from the power plant site would increase traffic volumes in the project area. Additional traffic from construction activities could have a significant impact on regional and local roadways, especially during commute hours. Although this impact would be short-term, additional traffic on roadways with a LOS at or below "C" would be a significant impact on roads near the power plant. Construction of SBRP would also generate traffic to haul hazardous waste for disposal. Because the transport of hazardous wastes will be conducted in accordance with the relevant transportation regulations no adverse impact is expected.

Construction of SBRP would require a temporary construction entrance and construction activities would generate temporary additional traffic on the regional and local roadways. During the peak construction lasting approximately 5 months, SBRP construction is expected to generate approximately 698 daily construction worker round trips. Construction would also generate approximately 3 daily heavy haul truck trips and a peak of 125 other daily truck trips. Approximately 40 percent of all construction-related trips would be expected to originate north of the SBRP site and use I-5, Bay Boulevard, southbound Bay Boulevard offramp, northbound Palomar Street on-ramp, and northbound J Street on-ramp to commute to and from the SBRP site. Approximately 40 percent of trips would be expected to originate east of the SBRP site and use L Street and Bay Boulevard. The remaining 20 percent of the

trips would originate south of the SBRP site and use I-5, Bay Boulevard, northbound Palomar Street off-ramp, and southbound Palomar Street on-ramp.

The addition of the forecasted SBRP traffic (698 daily vehicles) is not anticipated to result in a significant change to operations of most roadways throughout the day as it would not occur during the typical morning and afternoon peak periods. Segments of I-5 are the exception, mostly because they already operate at unacceptable LOS, LOS D for I-5 northbound, and LOS E for I-5 southbound. Addition of the construction worker trips would result in significant impacts at: northbound I-5 between Bay Boulevard/Industrial Boulevard to J Street; southbound I-5 between J Street to H Street; the northbound I-5/Palomar Street off-ramp; and the northbound I-5/J Street on-ramp. Since these locations are over capacity, construction-related SBRP traffic would be an adverse impact warranting site-specific mitigation. Implementing Mitigation measures T-9a and T-9b identified below would reduce this impact to a less than significant level (Class II).

Mitigation Measures for Impact T-9: Construction would generate additional traffic on the regional and local roadways (Class II)

T-9a **Prepare Construction Transportation Plan.**

T-~~9b~~9d **Prepare Traffic Impact Study (TIS).** The power plant site-specific TIS shall address trip reduction, alternative routing and alternative transportation for workers. The TIS shall address timing of heavy equipment and building material deliveries, debris removal, potential street and/or lane closures, signing, lighting, and traffic control device placement in order to reduce impacts on roadways during peak hours.

Impact T-10: Underground construction would restrict access to properties and businesses (Class II)

Construction of underground linear facilities on roadways could restrict access to properties and other neighboring roadways. Mitigation measure T-10a would require that construction crews be able to quickly lay a temporary steel plate trench bridge upon request in order to ensure property and roadway access to residents and businesses. This would reduce this impact to a less than significant level (Class II) because access to businesses and properties would not be restricted.

Mitigation Measure for Impact T-10: Underground construction would restrict access to properties and businesses

T-10a **Ensure access to properties and businesses.** [T-APM-10a]

Transportation and Traffic Operational Impacts for SBRP

SBRP would require a new permanent site entrance west from Bay Boulevard. Workers at SBRP would generate an estimated 34 daily trips, none of which are expected to occur during the morning and the evening peak as the operating shifts begins/ends at 7am (before the morning peak) and ends/begins at 7pm (after the evening peak). There would be 22 full-time employees working at the plant; however, not all of the workers would be onsite at the same time since the operators will work in shifts. The total number of worker trips and deliveries to SBRP would be fewer than those occurring with the existing SBPP.

Deliveries to SBRP would be infrequent, and for hazardous materials, deliveries would occur over prearranged routes. Transportation of aqueous ammonia, a regulated hazardous substance, and small quantities of various other hazardous materials would also be required. Aqueous ammonia is considered

a potential inhalation hazard. Division 14.3 Section 32105 of the California Vehicle Code specifies that unless there is not an alternative route, every driver of a vehicle transporting inhalation hazards shall avoid, by prearrangement of routes, driving into or through heavily populated areas, congested thoroughfares, or places where crowds are assembled. Operation of the SBRP would not cause traffic delays or lane closures, nor would operation of SBRP obstruct the area of influence of an airport as there are no airports within 20,000 feet of the project site. Therefore, no adverse impacts to transportation and traffic would be expected as a result of SBRP operation.

Transportation and Traffic for SDCPP

Transportation and Traffic Setting for SDCPP

The closest major highway to the SDCPP site is State Route 52. SR52, an east/west highway, is approximately 12,000 feet to the south of the site. In addition, there are three local roads that would be impacted by the construction and operation of the SDCPP. These roads include, Mast Boulevard, Fanita Parkway, and Santee Lakes Boulevard. All of the potentially impacted roads are within the City of Santee. Mast Boulevard is an east/west street; whereas Fanita Parkway and Santee Lakes Boulevard provide north/south access to the site. Table E.6.9-2 lists the roadway, classification, traffic volumes, and the related alternative component.

Table E.6.9-2. Public Roadways Near Non-Wires Alternatives – San Diego Community Power Project

Roadway	Jurisdiction	Classification	Existing Lanes	Traffic Volumes		Project Component
				Year	ADT	
State and County Facilities						
State Route 52	Caltrans	Collector	2	2005	3000	none
Fanita Parkway	Caltrans	Collector	2	2005	1400	Potential gas and water supply pipelines
Local Roadways						
Road	San Diego County	None	2	ND	—	

Construction and Operational Impacts for SDCPP

Section D.9.4 includes detailed descriptions of significance criteria for impacts.

Transportation and Traffic Construction Impacts for SDCPP

Transportation and traffic construction impacts for SDCPP would be similar to those that would occur for SBRP. Additionally, according to the SDCPP developer, the Federal Aviation Administration (FAA) has completed an aeronautical study under the provisions of 49 U.S.C., Section 44718. The study conducted by the FAA concluded that the construction and operation of the SDCPP would not pose a hazard to air navigation. The SDCPP site is located approximately 4 miles east of the station airfield APZs and falls under the Approach Departure Clearance Surface (Horizontal) and the Outer Horizontal Surface. All of the power plant development will fall below the Approach Departure Clearance Surface (Horizontal) and the Outer Horizontal Surface.

Impact T-1: Construction would cause temporary road and lane closures that would temporarily disrupt traffic flow (Class II)

Underground construction of linear facilities would potentially cause temporary lane closures should the new gas pipeline be under roads along Fanita Parkway or Santee Lakes Blvd. Delivery of large equipment and materials via truck may also require temporary lane or roadway closures. Such closures could increase traffic levels and constrain circulation in the area depending on the time of day, even if for only a few minutes at a time. Mitigation measures T-1b and T-1c would limit potential impacts to less than significant because permits would be acquired and detour plans would allow motorists to avoid or move through the construction zone as efficiently as possible. In addition, Implementation of mitigation measure T-1a is required to ensure that potentially significant impacts (Class II) associated with temporary road and lane closures would be reduced to less than significant levels.

Mitigation Measure for Impact T-1: Construction would cause temporary road and lane closures that would temporarily disrupt traffic flow

T-1a **Restrict lane closures.**

T-1b **Prepare detour plans. See Section D.9.11 for a description of this mitigation measure.**

T-1c **Obtain required permits.** ENPEX shall obtain required permits for the temporary lane closures from the appropriate jurisdiction(s) (City of Santee, MCAS Miramar, or other jurisdiction) prior to any construction activities.

Impact T-2: Construction would temporarily disrupt the operation of emergency service providers (Class II)

There is a possibility that emergency services would be needed at a location where access is temporarily blocked by the construction zone such as would potentially occur along Fanita Parkway or Santee Lakes Blvd. Impacts associated with temporary disruption of the operation of emergency service providers would be significant but would be reduced to less than significant with Implementation of mitigation measure T-2b.

Mitigation Measure for Impact T-2: Construction would temporarily disrupt the operation of emergency service providers

T-2b **Coordinate with Emergency Service Providers.** See Section D.9.11 for a description of this mitigation measure.

Impact T-3: Construction would temporarily disrupt bus transit services (Class II)

Construction would potentially disrupt bus transit service as there are two schools near to the intersection of Mast Blvd. and SR52, the West Hills High School and the Carlton Oaks School. Implementation of mitigation measure T-3b would result in less than significant impacts (Class II) because school districts and transit systems will be able to develop alternative routes and/or bus stops avoiding the construction zone.

Mitigation Measure for Impact T-3: Construction would temporarily disrupt bus transit services

T-3b **Consult with bus and transit services. See Section D.9.11 for a description of this mitigation measure.**

Impact T-4: Construction would temporarily disrupt pedestrian and/or bicycle movement and safety (Class II)

Pedestrian and bicycle circulation would be affected by construction activities if established pedestrian and bike routes were blocked. This would most likely occur on local roads such as Fanita Parkway or Santee Lakes Blvd. Implementation of mitigation measure T-4a (Ensure pedestrian and bicycle circulation and safety) would minimize this impact to a less than significant level (Class II).

Mitigation Measure for Impact T-4: Construction would temporarily disrupt pedestrian and/or bicycle movement and safety

T-4a Ensure pedestrian and bicycle circulation and safety.

Impact T-5: Construction vehicles and equipment would cause physical damage to roads in the project area (Class II)

Construction activities involving trenching in roadways for the installation of underground facilities would result in physical damage to the roads. Construction activities would also result in impacts associated with physical damage to roads from construction vehicles entering and leaving the roadways. Additionally, unexpected damage would occur on the roadways by vehicles and equipment transportation. Implementation of mitigation measure T-5a (Repair damaged roads) would reduce this impact to less than significant level because all roadways damaged would be repaired to pre-construction conditions (Class II).

Mitigation Measure for Impact T-5: Construction vehicles and equipment would cause physical damage to roads in the project area

T-5a Repair damaged roads.

Impact T-7: Construction would result in the short-term elimination of parking spaces (Class II)

Construction activities would result in short-term elimination of parking spaces immediately adjacent to the construction ROW and at construction staging areas. Mitigation measure T-7a would limit the impact to less than significant because the Applicant would provide temporary replacement of parking spaces if necessary (Class II).

Mitigation Measure for Impact T-7: Construction would result in short-term elimination of parking spaces

T-7a Notify public of potential short-term elimination of parking spaces.

Impact T-9: Construction would generate additional traffic on the regional and local roadways (Class II)

It is expected that an average of approximately 240 construction workers and a peak onsite construction workforce of 350 would be needed for the SDCPP. Workforce personnel would consist of laborers, craftsmen, supervisory personnel, support personnel, and construction management personnel. The traffic generated by construction personnel would be a temporary traffic and transportation impact on local roads and transportation routes.

For roadways that are over capacity, construction-related SDCPP traffic would be an adverse impact warranting site-specific mitigation. Available mitigation measures would include preparation of a Con-

struction Transportation Plan (CTP) to address the construction impacts listed above. Implementing mitigation measures T-9a and T-9b would reduce this impact to a less than significant level (Class II) because alternative routes and detours would be planned as part of the CTP and TIS in order to minimize traffic delays.

Mitigation Measure for Impact T-9: Construction would generate additional traffic on the regional and local roadways

T-9a Prepare Construction Transportation Plan.

T-~~9b~~9d Prepare Traffic Impact Study.

Impact T-10: Underground construction would restrict access to properties and businesses (Class II)

Underground construction on roadways would restrict access to properties and other neighboring roadways should the new gas pipeline be under roads along Fanita Parkway or Santee Lakes Blvd. Mitigation measure T-10a, requiring that construction crews be able to quickly lay a temporary steel plate trench bridge upon request in order to ensure property and roadway access to residents and businesses, would minimize this impact to less than significant because access would be provided at all times (Class II).

Mitigation Measure for Impact T-10: Underground construction would restrict access to properties and businesses

T-10a Ensure access to properties and businesses.

Transportation and Traffic Operational Impacts for SDCPP

The SDCPP would be operated and controlled by two or three power plant personnel during each shift. Transportation of aqueous ammonia would be required by State vehicle code to avoid, by prearrangement of routes, driving into or through heavily populated areas, congested thoroughfares, or places where crowds are assembled. Local roadways and thoroughfares would not be substantially impacted by the additional traffic generated by SDCPP operation because the LOS would not decrease. Additionally, no impacts to aviation are expected because the FAA concluded that the construction and operation of the SDCPP would not pose a hazard to air navigation. Therefore, no operational impacts are expected.

Transportation and Traffic for Peakers

Transportation and Traffic Setting for Peakers

Table E.6.9-3 lists the roadway, classification, traffic volumes, and the related alternative component for each peaking power plant project.

Miramar Energy Facility. Miramar II Peaker would be located adjacent to the Miramar Energy Facility. The Miramar Energy Facility is located at 5875 Consolidated Way in San Diego. Major roadways in the vicinity of the substation include:[36]

[36] San Diego County, 2007. General Plan Transportation Element, located online at: http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/planning/GP2020/pubs/elements/circulation.pdf. Accessed May 9.

- *Miramar Road*. An east-west major roadway located approximately 0.1 miles north of the substation site.
- *Carrol Road*. A north-south roadway located approximately 0.25 miles east of the substation site.
- *Interstate 805 Freeway*. A north-south freeway approximately 1.0 mile west of the substation site.

Pala Substation. The Pala Peaker would be located adjacent to the Pala Substation. The Pala Substation is located in the 10300 block of Pala Road (State Route 76) in Pala, which is located in northern San Diego County within proximity to the Pala Indian Reservation. Major roadways in the vicinity of the substation include:[37]

- *State Route 76*. An east-west major roadway located at the substation site.
- *Interstate 15 Freeway*. A north-south freeway located approximately 2.0 miles west of the substation site.

Margarita Substation. The Margarita Peaker would be located adjacent to the Margarita Substation. The Margarita Substation is located in the 28400 block of Antonio Parkway in Ladera Ranch, Orange County. The community of Ladera Ranch is located east of Interstate 5 between Mission Viejo and State Route 74. Major roadways in the vicinity of the substation include:[38]

- *Antonio Parkway*. A north-south major roadway located at the substation site.
- *Crown Valley Parkway*. An east-west roadway located approximately 1.2 miles north of the substation site.
- *Ortega Highway*. A local east-west highway located approximately 1.5 miles south of the site.
- *Interstate 5*. A major north-south freeway approximately 2.5 miles west of the substation site.

Borrego Springs Substation. The Borrego Peaker would be located adjacent to the Borrego Springs Substation. The Borrego Springs Substation is located on Borrego Valley Road in Borrego Springs in northeastern San Diego County. The site is along Borrego Valley Road just north of Palm Canyon Drive. Major roadways in the vicinity of the substation include:[39]

- *Yaqui Pass Road--State Route 3*. A north-south major roadway located approximately 1.0 mile south of the substation site.
- *Palm Canyon Drive--State Route 22*. An east-west major roadway located approximately 2.2 miles north of the substation site.
- *Borrego Springs Road*. A local southeast-northwest roadway located approximately 1.5 miles south of the site.
- *Highway 78*. An east west highway approximately 6.5 miles south of the substation site.

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[37] Ibid.

[38] Orange County, 2007. General Plan Transportation Element, located online at: http://www.ocplanning.net/docs/GeneralPlan2005/Chapter_IV_Transportation.pdf. Accessed May 9.

[39] San Diego County, 2007. General Plan Transportation Element, located online at: http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/planning/GP2020/pubs/elements/circulation.pdf. Accessed May 9.

Table E.6.9-3. Public Roadways Near Non-Wires Alternatives – Peaking Power Plants

Roadway	Jurisdiction	Classification	Existing Lanes	Traffic Volumes		Project Component
				Year	ADT	
State and County Facilities						
Interstate 805 (Miramar II)	Caltrans	Collector	2	2005	3000	none
Fanita Parkway	Caltrans	Collector	2	2005	1400	Potential gas and water supply pipelines
Local Roadways						
Miramar Road (Miramar II)	San Diego County	None	2	ND	—	
Carrol Road (Miramar II)	San Diego County	None	2	ND	—	

ND: No data available

Construction and Operational Impacts

Section D.9.4 includes detailed descriptions of significance criteria for impacts.

Transportation and Traffic Construction Impacts for Peakers

Transportation and traffic construction impacts for developing peaker power plants would be similar to those that would occur for the larger power plants describe above.

Impact T-1: Construction would cause temporary road and lane closures that would temporarily disrupt traffic flow (Class II)

Underground construction of linear facilities would cause temporary lane closures. This would potentially occur where an underground gas pipeline lateral would be constructed along State Route 76 for the Pala Peaker. It would potentially also occur where an underground gas pipeline would be constructed along Antonio Parkway for the Margarita Peaker. Delivery of large equipment and materials via truck may also require temporary lane or roadway closures. Such closures could increase traffic levels and constrain circulation in the area depending on the time of day, even if for only a few minutes at a time. Mitigation measures T-1b and T-1c would limit potential impacts to less than significant because permits would be acquired and detour plans would allow motorists to avoid or move through the construction zone as efficiently as possible. In addition, Implementation of mitigation measure T-1a is required to ensure that potentially significant impacts (Class II) associated with temporary road and lane closures would be reduced to less than significant levels.

Mitigation Measure for Impact T-1: Construction would cause temporary road and lane closures that would temporarily disrupt traffic flow

T-1a **Restrict lane closures.**

T-1b **Prepare detour plans. See Section D.9.11 for a description of this mitigation measure.**

T-1c **Obtain required permits.** ENPEX shall obtain required permits for the temporary lane closures from the appropriate jurisdiction(s) (City of Santee, MCAS Miramar, or other jurisdiction) prior to any construction activities.

Impact T-2: Construction would temporarily disrupt the operation of emergency service providers (Class II)

The construction for the peakers would occur near existing roadways and would potentially require temporary road or land closures (See Impact T-1). As such, impacts to the operation of emergency service providers would potentially occur. Impacts associated with temporary disruption of the operation of emergency service providers would be significant but would be reduced to less than significant with Implementation of mitigation measure T-2b.

Mitigation Measure for Impact T-2: Construction would temporarily disrupt the operation of emergency service providers

T-2b **Coordinate with Emergency Service Providers.** See Section D.9.11 for a description of this mitigation measure.

Impact T-3: Construction would temporarily disrupt bus transit services (Class II)

As the peaker sites are all located off of local roadways, construction would potentially impact bus transit services should road or lane closures interfere with transit routes or school bus routes. Implementation of mitigation measure T-3b would result in less than significant impacts (Class II) because school districts and transit systems will be able to develop alternative routes and/or bus stops avoiding the construction zone.

Mitigation Measure for Impact T-3: Construction would temporarily disrupt bus transit services (Class II)

T-3b **Consult with bus and transit services.** See Section D.9.11 for a description of this mitigation measure.

Impact T-4: Construction would temporarily disrupt pedestrian and/or bicycle movement and safety (Class II)

Pedestrian and bicycle circulation would be affected by construction activities if established pedestrian and bike routes were blocked. Implementation of mitigation measure T-4a (Ensure pedestrian and bicycle circulation and safety) would minimize this impact to a less than significant level (Class II).

Mitigation Measure for Impact T-4: Construction would temporarily disrupt pedestrian and/or bicycle movement and safety

T-4a **Ensure pedestrian and bicycle circulation and safety.**

Impact T-5: Construction vehicles and equipment would cause physical damage to roads in the project area (Class II)

Construction activities involving trenching in roadways for the installation of underground facilities would result in physical damage to the roads. Construction activities would also result in impacts associated with physical damage to roads from construction vehicles entering and leaving the roadways. Additionally, unexpected damage would occur on the roadways by vehicles and equipment transportation. Implementation of mitigation measure T-5a (Repair damaged roads) would reduce this impact to less than significant level because all roadways damaged would be repaired to pre-construction conditions (Class II).

Mitigation Measure for Impact T-5: Construction vehicles and equipment would cause physical damage to roads in the project area

T-5a Repair damaged roads.

Impact T-6: Construction activities would cause a temporary disruption to rail traffic or operations (Class III)

Construction activities would potentially interfere with rail operations for the Miramar II peaker plant as construction would take place adjacent to the Atchinson, Topeka & Santa Fe railway. Construction activities within the railroad ROW could temporarily affect rail operations; however, the Applicant would be required to comply with the regulations and procedures of the Railroad relative to disruption to rail service or safety and obtain all appropriate permits, thereby reducing this impact to less than significant (Class III) and no mitigation is required.

Mitigation Measure for Impact T-6: Construction activities would cause a temporary disruption to rail traffic or operations

T-~~6b~~6a Obtain railroad right-of-way permit.

Impact T-7: Construction would result in the short-term elimination of parking spaces (Class II)

Construction activities would result in short-term elimination of parking spaces immediately adjacent to the construction ROW and at construction staging areas. Mitigation measure T-7a would limit the impact to less than significant because the Applicant would provide temporary replacement of parking spaces if necessary (Class II).

Mitigation Measure for Impact T-7: Construction would result in short-term elimination of parking spaces

T-7a Notify public of potential short-term elimination of parking spaces.

Impact T-9: Construction would generate additional traffic on the regional and local roadways (Class II)

Construction activities resulting from implementing the proposed peaker project alternatives are expected to require a maximum of approximately 40 temporary construction workers during peak construction phases. Thus, a maximum of approximately 40 inbound and outbound worker commuting trips would occur. Construction activity truck trips are projected to peak at six trucks per day, and construction of each peaker project is estimated to take three to four months to complete. Although the peaker projects would not be likely to generate more than 100 trips during the peak hours (Caltrans impact threshold), construction could adversely affect roadways in the vicinity with a LOS of "C" or lower or roadways that are already congested.

For roadways that are near or over capacity, construction-related traffic would be an adverse impact warranting site-specific mitigation. Available mitigation measures would include preparation of a TIS to address the construction impacts listed above. Implementing the following mitigation from the Proposed Project and the new mitigation identified below would reduce this impact to a less than significant level (Class II) because detour plans would be prepared reducing congestion on roadways.

Mitigation Measure for Impact T-9: Construction would generate additional traffic on the regional and local roadways

T-9a Prepare Construction Transportation Plan.

T-~~9b~~9d Prepare Traffic Impact Study.

Transportation and Traffic Operational Impacts for Peakers

Peaker power plants would generally be unmanned during the operational phase, and operations would likely result in a negligible number of worker trips (anticipated to be less than one worker trip to and from the peaker sites per day). Where water deliveries and on-site fuel storage is required, for example at Borrego Springs Substation, more delivery truck trips per year would be required. This number of required trips would be considered negligible on the existing street network. No other operation-related trips are expected. Therefore, no significant adverse traffic impacts are expected during the operational phase.

Overall Transportation and Traffic Impacts of the New In-Area All-Source Generation Alternative

Conventional Generation

For any power plant development under the New In-Area All-Source Generation Alternative, the construction impacts: temporary road and lane closures, disruption of emergency service providers and bus transit services, pedestrian and bicycle disruptions, physical damage to roads, disruption of rail traffic, elimination of parking, and access restriction to properties and businesses (Impact T-1 through Impact T-10) would either be less than significant or reduced to a less than significant level with mitigation measures similar to those for the Proposed Project. The impact of power plant construction traffic on local roadways (Impact T-9) would require the new mitigation T-9b (Prepare Traffic Impact Study) to reduce this impact to a less than significant level (Class II).

Normal operations of the power plants under the New In-Area All-Source Generation Alternative would not substantially increase traffic volumes on local roadways or thoroughfares nor would the operations obstruct airport influence areas. Therefore, no significant adverse traffic and transportation impacts are expected during the operation of the New In-Area All-Source Generation Alternative.

Renewable Generation

For overall impacts of the New In-Area Renewable Generation, please see Section E.5 (Solar Photovoltaics, Biomass/Biogas and Wind components).

E.6.10 Public Health and Safety

Public Health and Safety Regulatory Setting for Conventional Power Plants

This section deals with the use and potential impacts to persons and the environment as a result of hazardous materials associated with construction and operational activities for the New In-Area All-Source Generation Alternative. Other public health and safety impacts relating to flooding, seismic events, and fire hazards are evaluated in Section E.6.12 (Water Resources), Section E.6.13 (Geology, Mineral Resources, and Soils), and Section E.6.15 (Fire and Fuels Management), respectively.

Several agencies regulate hazardous materials. Agency-required permits related to public health include a Risk Management Plan (RMP) for hazardous materials and the San Diego Air Pollution Control District Authority to Construct and Permit to Operate. The air pollutant emissions caused by existing and future potential power plant construction and operation directly affect public health; however, in this assessment, they are discussed under Section E.6.11 (Air Quality).

The U.S. EPA at the federal level, and the DTSC and CalEPA at the State level, regulate nonhazardous and hazardous waste and would be involved in the regulation of the waste generated by any power plant project. The regulations, however, are administered and enforced primarily through the San Diego County Department of Environmental Health, Hazardous Materials Division (HMD), which is the designated Certified Unified Program Agency (CUPA). The HMD is the local entity responsible for inspecting hazardous waste generators and reviewing their procedures for storage, treatment, and disposal of hazardous wastes (the Hazardous Materials Business Plan) and for environmental contamination issues and site redevelopment.

Public Health and Safety for SBRP

Existing Contamination at SBRP

Previous Phase I and Phase II Environmental Site Assessments for the existing 115-acre SBPP site indicate that there is a potential for varying levels of heavy metals, petroleum hydrocarbons, and PCBs in the subsurface soils and groundwater (Fluor Daniel GTI, 1998 a, b). Several locations at the SBPP site could not be accessed by the SBRP developer because they were beneath existing structures such as the power plant buildings, tanks, and piping (Fluor Daniel GTI, 1998 b).

For SBRP, the primary local agencies with jurisdiction are the San Diego County Department of Environmental Health and the City of Chula Vista Fire Department.

Public Health and Safety Construction Impacts for SBRP

Impact P-2 (Residual pesticides and/or herbicides could be encountered) and Impact P-4 (encountering unexploded ordinance) would not occur at the SBRP site because of its present and historical use as a power plant site, and as such, these impacts are not addressed in this section.

Impact P-1: Soil or groundwater contamination could result from accidental spill or release of hazardous materials due to improper handling and or storage of hazardous materials during construction activities ~~Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination~~ (Class II)

Hazardous materials that would be used during construction of any power plant include gasoline, diesel fuel, oil, and lubricants for construction equipment, and small quantities of solvents and paint. Mobile fuel trucks are commonly brought onsite to fuel equipment. Non-hazardous solid waste generated during construction would need to be taken offsite for recycling or disposal to the nearest permitted Class III landfill. Small volumes of hazardous materials including oil and lubricants for construction equipment, solvents and paint would be temporarily stored onsite inside fuel and lubrication service trucks. Paints and solvents would be stored in flammable material storage cabinets. Construction personnel would be trained in handling these materials. The most likely incidents involving these hazardous materials would be associated with minor spills or drips. Small spills and drips can be easily cleaned up, so impacts from these minor releases during construction are considered to result in less than significant health safety risks. Soil or groundwater contamination resulting from spills or leaks of hazardous materials during project construction would be a significant impact.

Hazardous materials to be used during the construction phase for SBRP and its associated linear facilities would include gasoline, diesel fuel, motor oil, hydraulic fluid, solvents, cleaners, sealants, welding flux, various lubricants, paint, and paint thinner. The quantities of hazardous materials that would be handled during the construction and demolition phases of SBRP are relatively small and Best Management Practices (BMPs) would be implemented by contractor personnel. Therefore, the potential for environmental effects is expected to be small.

Most of the hazardous waste generated during SBRP construction would consist of liquid waste, such as flushing and cleaning fluids, passivating fluid (to prepare pipes for use), and solvents. Some hazardous solid waste, such as welding materials and dried paint, may also be generated. Hazardous waste transporters would be required to obtain a Hazardous Material Transportation License in accordance with California Vehicle Code Section 32105 and would be required to follow appropriate safety procedures and routes.

Mitigation Measures P-1a (Implement Environmental Monitoring Plan), mitigation measure P-1b (Maintain emergency spill supplies and equipment), and P-1c (Train personnel in proper use and safety procedures for chemicals used) would avoid soil or groundwater contamination resulting from the improper handling and/or storage of hazardous materials. Implementing these measures and additional measures for site-specific power plant construction wastes would reduce this impact to a less than significant level (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measures for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a **Implement Environmental Monitoring Program.**

P-1b **Maintain emergency spill supplies and equipment.**

P-1c **Personnel trained in proper use and safety procedures for the chemicals used.**

P-1NWg **Prepare power plant construction waste management plan.** Hazardous waste from power plant construction and/or associated demolition on on-site structures shall be collected in satellite accumulation containers near the points of generation. It shall be moved daily to the contractor's 90-day hazardous waste storage area, located at one of the site's construction laydown areas. The waste shall be removed from the site by a certified hazardous

waste collection company and delivered to an authorized hazardous waste management facility, prior to expiration of the 90-day storage limit. A Construction Waste Management Plan shall be prepared to describe procedures that will be used during construction activities.

Impact P-3: Previously unknown soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Ground disturbance at any power plant site would consist primarily of excavation for foundations and for linear facilities. Grading of new access roads would also cause ground disturbance. Unknown existing environmentally contaminated sites could occur at any power plant site, and unknown contamination may be present in developed areas near linear facilities and in remote areas and roads due to illegal dumping. Contamination from petroleum products (gasoline, oil, and diesel) is one of the most common types of unknown contamination encountered and is generally detectable by visual and olfactory observation. Encountering this contamination would result in an adverse public health and safety hazard. Impacts associated with encountering previously unknown soil and/or groundwater contamination are considered to be mitigable to less than significant levels. Mitigation measures P2-b (Stop work if contamination is detected), P2-c (Cordon off contaminated areas), P2-d (Notify regulatory agencies), and P-2e (Observe exposed soil) are recommended. Incorporation of these measures would reduce the impact to an insignificant level (Class II). The full text of all mitigation measures is presented in Appendix 12.

Mitigation Measures for Impact P-3: Previously unknown soil and/or groundwater contamination could be encountered during excavation or grading

P-2b **Stop work if contamination is detected.**

P-2c **Cordon off contaminated areas.**

P-2d **Notification of regulatory agencies.**

P-2e **Observe exposed soil.** Contractor personnel shall be trained for visual and olfactory indicators of soil contamination, such as discoloration or staining of the soil and or noxious odors. If such indicators are noted personnel shall record the observations and the location in a field report and Mitigation Measure P-2b shall be implemented.

Impact P-~~6~~7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites (Class II)

Power plant sites commonly involve or are near previous industrial or commercial activity that could contain existing soil or groundwater contamination. Mitigation is necessary to ensure existing pollution characterization and determine the presence of contaminated sites and the full potential for contaminated soil and/or groundwater to be encountered during construction. Mitigation measures P-7a and P-~~7b~~ 7c would be implemented and would require that all Government Code §65962.5 sites or other known contamination sites affected by construction work shall be investigated to determine potential impacts. The following mitigation measures would be required to ensure that this potential impact is reduced to a less than significant level (Class II).

Mitigation Measures for Impact P-~~6~~7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites

P-7a **Evaluate contaminated sites.**

P-~~7b~~7c **Conduct Environmental Database Review.** ~~An~~ The developer of a power plant constructed for this alternative shall perform an environmental database review shall be conducted for power plant sites including access roads, linear facility routes, and staging areas. The results of the environmental database review and recommended measures shall be provided to San Diego County for review and approval prior to land use clearance. Any identified sites shall be evaluated in accordance with Mitigation Measure P-7a.

Public Health and Safety Operational Impacts for SBRP

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class II)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials in the project area during maintenance operations. This could potentially result in exposure of maintenance workers and the public to hazardous materials. Available mitigation measures include P-1a (Implement Environmental Monitoring Program), P-1b (Maintain emergency spill supplies and equipment), P-1c (Train personnel in proper use and safety procedures), P-1e (Prepare environmental safety plans), and P-1g (Properly store and dispose generated waste). These measures would ensure that impacts to workers and the public would be less than significant (Class II).

Mitigation Measures for Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance

P-1a **Implement Environmental Monitoring Program.**

P-1b **Maintain emergency spill supplies and equipment.**

P-1c **Personnel trained in proper use and safety procedures for the chemicals used.**

P-1e **Preparation of environmental safety plans including spill prevention and response plan.**

P-1g **Proper storage and disposal of generated waste.**

Impact P-~~8~~9: Use and storage of hazardous materials at power plant sites would create public health and safety hazards (Class I)

Several hazardous materials, including regulated substances (aqueous ammonia, hydrogen, and sulfuric acid), would be stored at the SBRP site during operation. However, only aqueous ammonia will be stored in amounts above the threshold quantity during the final stages of construction, initial startup, and operations phase. An RMP would need to be prepared consistent with the CalARP program requirements. The closest fire station is located about 1.3 miles from the SBRP site at the corner of 4th Avenue and Oxford Street.

Hydrogen storage would create a fire and explosion risk at SBRP because 20,000 cubic feet (110 lbs) of hydrogen would be stored onsite. Hydrogen is highly flammable and readily forms explosive mixtures with air. Proper design, construction, and maintenance of the hydrogen storage facility would minimize leaks and the risk of fire or explosion. Lubrication oil and diesel fuel are flammable and would be handled in accordance with a Hazardous Materials Business Plan (HMBP) to be approved by HMD. Hydraulic oil, which is classified as combustible, would also be handled in compliance with the HMBP. With proper storage and handling of flammable materials in accordance with the HMBP, the risk of fire and explosion at the generating facility would be minimal. Natural gas fuel is also flammable, but the risk of leakage is common with transmitting natural gas via pipeline, and this hazard would be similar to that which occurs for the existing SBPP. For the new power plant, mitigation would be required to

ensure that an offsite consequence analysis is performed to assess potential risks to offsite human populations if a spill or rupture of the aqueous ammonia storage tank occurs.

Transport of hazardous materials during power plant operation includes delivery of aqueous ammonia and removal of wastes. During operation, the aqueous ammonia transporter would be required to obtain a Hazardous Material Transportation License in accordance with California Vehicle Code Section 32105 and would be required to follow appropriate safety procedures and routes.

Available mitigation measures include P-1a (Implement Environmental Monitoring Program), P-1b (Maintain emergency spill supplies and equipment), P-1c (Train personnel in proper use and safety procedures), P-1e (Prepare environmental safety plans), and P-1g (Properly store and dispose generated waste). These measures and additional Mitigation Measure P-~~8a~~ 9b require analysis of offsite consequences and would reduce impacts to workers and the public, but without comprehensive assessment (a current contamination database search) and certain reduction of the potential hazards, this impact is considered significant and unavoidable (Class I). A specific Fire Prevention and Response Plan (FPRP) is considered in Section E.6.15, Fire and Fuels Management.

In addition, Legionnaires' Disease Bacteria (LDB) can be a public health threat caused by the aerosolization of water from cooling towers if the cooling towers are not properly maintained and operated. Legionnaires' disease is a pneumonia, which attacks 2 to 5 percent of those exposed. Between 5 and 15 percent of those infected die from the disease. Outbreaks of the disease have been attributed to contaminated aerosols from cooling towers or evaporative condensers (Gagliardo et al., 2005). An outbreak of the disease as a result of operation of cooling towers would be considered a significant impact (Class II).

Currently there are no uniform guidelines, rules or regulations regarding Legionella in the United States. Various state departments of heath have published guidelines for reporting confirmed cases to the Center for Disease Control and performing potential source investigations. The U.S. Department of Labor Occupational Safety and Health Administration (OSHA) has published recommended guidelines for control of LDB, which have been incorporated into Mitigation Measure P-8c (OSHA, 2008).[40] To minimize the threat of LDB from cooling towers to a less than significant level through system design to allow for easy access for cleaning of internal parts, periodic cleaning and maintenance, and use of biocides, Mitigation Measure P-8c, Control growth of Legionnaires' Disease Bacteria, is recommended.

Mitigation Measures for Impact P-~~8~~9: Use and storage of hazardous materials at power plant sites would create public health and safety hazards (Class I)

P-1a **Implement Environmental Monitoring Program.**

P-1b **Maintain emergency spill supplies and equipment.**

P-1c **Personnel trained in proper use and safety procedures for the chemicals used.**

P-1e **Preparation of environmental safety plans including spill prevention and response plan.**

P-1g **Proper storage and disposal of generated waste.**

P-~~8a~~9b **Prepare Offsite Consequence Analysis and Emergency Action Plan.** The power plant developer shall prepare an offsite consequence analysis of the worst-case hazardous materials release, and an Emergency Action Program/Plan shall be established that describes escape pro-

[40] OSHA (U.S. Department of Labor Occupational Safety and Health Administration). 2008. Legionnaires' Disease Source and Control: Section II:A. Cooling Towers, Evaporative Condensers, and Fluid Coolers. Online at http://www.osha.gov/dts/osta/otm/legionnaires/cool_evap.htm. Accessed on August 6.

cedures, rescue and medical procedures, alarm and communication systems, and response procedures for hazardous materials that can migrate, such as ammonia. The programs or plans shall be contained in written documents at specific locations within the facility. A fire protection and prevention program shall also be established.

P-8c **Control growth of Legionnaires' Disease Bacteria (LDB).** The Applicant shall incorporate the following system design features recommended by the U.S. Department of Labor Occupational Safety and Health Administration (OSHA) for control of LDB:

- Ensure enclosure of the system to prevent drift of water vapor.
- Include design features that minimize the spray generated by the cooling system.
- Operate with low sump-water temperatures.
- Equip each sump with a "bleed," and make-up water shall be supplied to reduce the concentration of dissolved solids.
- Install high-efficiency drift eliminators for all cooling towers, which will reduce water loss and potential for exposure.

During operation, the Applicant shall properly monitor and maintain the cooling system according to manufacturers' recommendations to prevent buildup of scale, sediment, and bio-fouling. The Applicant shall perform monthly visual inspection and periodic maintenance of the system to control growth of LDB and related organisms, as suggested by the following OSHA recommended guidelines.

- Clean and disinfect cooling towers quarterly or at least twice a year if the unit is not used year-round. This shall be completed before initial start-up at the beginning of the cooling season and after shutdown in the fall.
- Systems with heavy bio-fouling or high levels (>100 colony forming units per milliliter, CFU/mL) of LDB shall require additional cleaning.
- Any system that has been out of service for an extended period shall be cleaned and disinfected.
- New systems shall require cleaning and disinfecting, because construction material residue can contribute to LDB growth.
- Monthly microbiologic analysis shall be required to ensure control of biological contamination.

In addition, the Applicant shall ensure the systematic use of system-appropriate biocides to control the growth of LDB. Monitoring of LDB shall be carried out for the life of the project to ensure public safety. If any LDB is noted in the testing, the appropriate decontamination and treatment measures shall be employed to clean the cooling towers and associated cooling water.

The Applicant shall be responsible to document operations and maintenance, listing dates of inspections and cleanings, water-quality test results, LDB outbreak investigations, and maintenance. The Applicant shall also maintain an up-to-date description of the operating system (which includes all components cooled by the system) and details of the make-up water to the system. The written procedures for proper operation and maintenance of the system shall indicate the use of scale and corrosion inhibitors and antifoaming agents.

Written records of systematic biocide or chlorine use shall be readily available upon request.

Public Health and Safety for SDCPP

Public Health and Safety Setting for SDCPP

There are no residences ~~or public facilities~~ with in 1,000 feet of the SDCPP. The SDCPP is located on the MCAS Miramar Station and is within open space, ridgelines, and valleys. Located to the east of the SDCPP site is the Padre Dam and Sewage Treatment Facility and associated facilities would be within 1,000 feet of the site.

Construction and Operational Impacts

Section D.10.5 includes a discussion of significance criteria for impacts related to public health and safety.

Public Health and Safety Construction Impacts for SDCPP

Impact P-1: Soil or groundwater contamination could result from accidental spill or release of hazardous materials due to improper handling and or storage of hazardous materials during construction activities ~~Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination~~ (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities, resulting in a potential for soil contamination from improper handling, spills, or leaks, a significant impact. Soil or groundwater contamination resulting from spills or leaks of hazardous materials during project construction would be a significant impact. Mitigation measures, listed below, similar to SDG&E's APMs for the Proposed Project would be implemented to reduce this impact. Small spills or drips that may occur would easily be cleaned up, especially if identified quickly. However, in the event larger spills or leaks occurred, soil or groundwater contamination could occur, particularly if not identified promptly, resulting in a significant impact. Mitigation measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) are necessary to reduce the significant environmental impacts of hazardous material spills to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a **Implement Environmental Monitoring Program.**

P-1b **Maintain emergency spill supplies and equipment.**

P-1c **Personnel trained in proper use and safety procedures for the chemicals used. See Section D.10.11 for a description of this and the following mitigation measures.**

P-1d **Personnel trained in refueling of vehicles.**

P-1e **Preparation of environmental safety plans including spill prevention and response plan.**

P-1f **Applicant's and/or General Contractor environmental/health and safety personnel.**

P-1g **Proper storage and disposal of generated waste.**

Impact P-3: Previously unknown soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Ground disturbance at any power plant site would consist primarily of excavation for foundations and for linear facilities. Grading of new access roads would also cause ground disturbance. Unknown existing environmentally contaminated sites could occur at any power plant site, and unknown contamination may be present in developed areas near linear facilities and in remote areas and roads due to illegal dumping. Contamination from petroleum products (gasoline, oil, and diesel) is one of the most common types of unknown contamination encountered and is generally detectable by visual and olfactory observation. Additionally the SDCCP site is located within the eastern edge of Miramar Corps Air Station boundary and historically areas of Miramar have been used for bombing and munitions testing. There is a potential for lead waste and lead contaminated soil to occur at gun and artillery ranges and bombing and munitions testing areas due to the breakdown of lead ordnance and ammunition in the soil. Encountering this contamination would result in an adverse public health and safety hazard. Impacts associated with encountering previously unknown soil and/or groundwater contamination are considered to be mitigable to less than significant levels. Mitigation measures similar to SDG&E's APMs for the Proposed Project would be implemented as part of these future projects, including: Mitigation Measure P-2b, mitigation measure P-2c, and Mitigation Measure P-2d, which would be implemented as a part of the project in order to reduce the significance of this impact. In addition, mitigation measures P-3a and P-3b would also need to be implemented to reduce the impact to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-2b **Stop work if contamination is detected.**

P-2c **Cordon off contaminated areas.**

P-2d **Notification of regulatory agencies.**

P-3a **Appoint individuals with correct training for sampling, data review, and regulatory coordination.**

P-3b **Documentation of compliance with measures for encountering unknown contamination.**

Impacts P-4: Areas used by the military may contain unexploded ordnance (UXO) and could explode and injure workers or the public during construction (Class II)

The SDCPP site is located within the eastern edge of the Miramar Marine Corps Air Station boundary. Historically areas of Miramar have been used for bombing and munitions testing. This results in a potential of encountering UXO during excavation for the power plant or linear facilities. This could result in death or injury to workers, a significant impact. Impacts associated with unexploded ordinance would be significant, but Implementation of mitigation measures P-4a and P-4b would reduce the impacts to be less than significant (Class II).

Mitigation Measure for Impact P-4: Areas used by the military may contain unexploded ordnance (UXO) and could explode and injure workers or the public during construction

P-4a **Unexploded ordnance to be removed by trained personnel.**

P-4b **Train project personnel to recognize unexploded ordnance.**

Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites (Class II)

Excavation could encounter contamination and allow it to move into previously uncontaminated areas. ENPEX would implement mitigation measures similar to SDG&E's APMs for the Proposed Project to reduce impacts from known contaminated soil and groundwater, including Mitigation Measure P-1g and Mitigation Measure P-7b below. In order to reduce potential health hazards related to exposure of construction personnel and/or the public to hazardous materials in the soil, groundwater, or surface water to less than significant, ENPEX would implement Mitigation Measure P-7a (Evaluate contaminated sites). This four step mitigation measure would reduce environmental impacts to less than significant (Class II).

Mitigation Measure for Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites

P-1g **Proper storage and disposal of generated waste.**

P-7a **Evaluate contaminated sites.**

P-7b **Conduct Environmental Database Review.~~Investigate contaminated sites~~.**

Public Health and Safety Operational Impacts for SDCPP

Operational impacts to public health and safety would include potential spills or releases of natural gas and other hazardous materials. Additionally, public health could be affected by non-hazardous materials such as solid waste generated at SDCPP. Emergency systems would be part of the design of the power plant to ensure safe and reliable operation and worker safety programs would be developed in compliance with federal and State occupational safety and health standards.

Compliance with all applicable regulations would ensure health and safety risks would be minimized, and the risks to soil or groundwater contamination resulting from an accidental spill of hazardous materials (Impact P-5) would be similar to those described for the SBRP (Class II). Herbicides used for vegetation control for project maintenance would cause an adverse impact, but it would be less than significant (Class III).

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class II)

Power plant operation and maintenance can result in accidental releases of hazardous materials. Mitigation measures similar to SDG&E's APMs for the Proposed Project would reduce the likelihood of spills and would reduce any significant impacts of spills, but they would not completely prevent spills from occurring. This would be a significant impact, reduced to a less than significant level by the mitigation measures listed below (Class II).

Mitigation Measure for Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance

P-1c **Personnel trained in proper use and safety procedures for the chemicals used.**

P-1e **Preparation of environmental safety plans including spill prevention and response plan.**

P-1g **Proper storage and disposal of generated waste.**

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

Maintenance workers on peaker sites could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Members of the public accessing the site may cause dust to become airborne and inhaled. However, considering the generally low toxicity of herbicides used for vegetation management, their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public, the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is a less than significant impact and does not require additional mitigation (Class III).

Impact P-~~8~~9: Use and storage of hazardous materials at power plant sites would create public health and safety hazards (Class I)

Several hazardous materials, including regulated substances (aqueous ammonia, hydrogen, and sulfuric acid) may be stored at the SDCPP site during operation. However, only aqueous ammonia will be stored in amounts above the threshold quantity during the final stages of construction, initial startup, and operations phase. An RMP would need to be prepared consistent with the CalARP program requirements.

Hydrogen storage would create a fire and explosion risk at SDCPP if large quantities were stored onsite. Hydrogen is highly flammable and readily forms explosive mixtures with air. Proper design, construction, and maintenance of the hydrogen storage facility would minimize leaks and the risk of fire or explosion. Lubrication oil and diesel fuel are flammable and would be handled in accordance with a Hazardous Materials Business Plan (HMBP) to be approved by HMD. Hydraulic oil, which is classified as combustible, would also be handled in compliance with the HMBP. With proper storage and handling of flammable materials in accordance with the HMBP, the risk of fire and explosion at the generating facility would be minimal. Natural gas fuel is also flammable, but the risk of leakage is common with transmitting natural gas via pipeline, and this hazard would be similar to that which occurs for the existing SDCPP. For the new power plant, mitigation would be required to ensure that an offsite consequence analysis is performed to assess potential risks to offsite human populations if a spill or rupture of the aqueous ammonia storage tank occurs.

Transport of hazardous materials during power plant operation includes delivery of aqueous ammonia and removal of wastes. During operation, the aqueous ammonia transporter would be required to obtain a Hazardous Material Transportation License in accordance with California Vehicle Code Section 32105 and would be required to follow appropriate safety procedures and routes.

Available mitigation measures include P-1a (Implement Environmental Monitoring Program), P-1b (Maintain emergency spill supplies and equipment), P-1c (Train personnel in proper use and safety procedures), P-1e (Prepare environmental safety plans), and P-1g (Properly store and dispose generated waste). These measures and additional Mitigation Measure P-~~8a~~ 9a require analysis of offsite consequences and would reduce impacts to workers and the public, but without comprehensive assessment (a current contamination database search) and certain reduction of the potential hazards, this impact is considered significant and unavoidable (Class I). A specific Fire Prevention and Response Plan (FPRP) is considered in Section E.6.15, Fire and Fuels Management.

Mitigation Measures for Impact P-~~8~~9: Use and storage of hazardous materials at power plant sites would create public health and safety hazards (Class I)

P-1a **Implement Environmental Monitoring Program.**

P-1b **Maintain emergency spill supplies and equipment.**

P-1c **Personnel trained in proper use and safety procedures for the chemicals used.**

P-1e **Preparation of environmental safety plans including spill prevention and response plan.**

P-1g **Proper storage and disposal of generated waste.**

P-~~8a~~9b **Prepare Offsite Consequence Analysis and Emergency Action Plan**.

Public Health and Safety for Peakers

Public Health and Safety Setting for Peakers

Miramar Substation. The available site is 1.5 acres and is graded and paved adjacent to railroad tracks and is located with the boundaries of the Miramar Corps Air Station. Natural gas is available on site, and the site offers potential to interconnect to a 69 kV transmission line. A concrete storage pad of approximately 1,500 square feet would need to be demolished prior to installing any peakers at this site. An EDR contamination database search (see Appendix 13) shows five sites within 800 feet of the substation.

Pala Substation. A portion of the site proposed for development includes an existing orchard and a fenced in area with a few small structures. Depending on the development of the project, some or all of the structures may need to be demolished. Natural gas is available approximately 3.0 miles away, and there is access for interconnection to a 69 kV line. To determine nearby locations using hazardous materials or locations classified as hazardous, a detailed records search of federal and State databases is required. The records search conducted for the Pala Substation is presented in Appendix 13; no nearby sites have been identified.

Margarita Substation. The undeveloped portion of the substation is fairly steeply sloping land that includes a concrete pad. This property is immediately surrounded by another concrete pad and undeveloped or agricultural land on the outskirts of Ladera Ranch. The nearest natural gas supply is approximately 1.5 miles away, and the available interconnection is to a 138 kV line. The records search (EDR) conducted for the Margarita Substation is presented in Appendix 13; no nearby sites have been identified.

Borrego Springs Substation. The substation site includes 2 acres of graded but undeveloped desert land. Because of limited natural gas supplies, the site has been identified by SDG&E as suitable only for biodiesel (e.g., B20 grade or 20% biodiesel mixed with 80% conventional diesel fuel). This would require on-site fuel storage and fire suppression. The nearest interconnection would be a 12 kV line. To determine nearby locations using hazardous materials or locations classified as hazardous, a detailed records search of federal and State databases is required.

Construction and Operational Impacts

Section D.10.5 includes a discussion of significance criteria for impacts related to public health and safety.

Public Health and Safety Construction Impacts for Peakers

Public health and safety impacts during construction and operation of the peakers would be similar to those that would occur for SBRP, and are described below.

Impact P-1: Soil or groundwater contamination could result from accidental spill or release of hazardous materials due to improper handling and or storage of hazardous materials during construction activities~~Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination~~ (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities, resulting in a potential for soil contamination from improper handling, spills, or leaks, a significant impact. Soil or groundwater contamination resulting from spills or leaks of hazardous materials during project construction would be a significant impact. Mitigation measures, listed below, similar to SDG&E's APMs for the Proposed Project would be implemented to reduce this impact. Small spills or drips that may occur would easily be cleaned up, especially if identified quickly. However, in the event larger spills or leaks occurred, soil or groundwater contamination could occur, particularly if not identified promptly, resulting in a significant impact. Mitigation measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) are necessary to reduce the significant environmental impacts of hazardous material spills to less than significant (Class II).

Mitigation Measure for Impact P-1: Soil or groundwater contamination could result from accidental spill or release of hazardous materials due to improper handling and or storage of hazardous materials during construction activities~~Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination~~

P-1a **Implement Environmental Monitoring Program.**

P-1b **Maintain emergency spill supplies and equipment.**

P-1c **Personnel trained in proper use and safety procedures for the chemicals used. See Section D.10.11 for a description of this and the following mitigation measures.**

P-1d **Personnel trained in refueling of vehicles.**

P-1e **Preparation of environmental safety plans including spill prevention and response plan.**

P-1f **Applicant's and/or General Contractor environmental/health and safety personnel.**

P-1g **Proper storage and disposal of generated waste.**

Impact P-2: Residual pesticides and/or herbicides could be encountered during grading or excavation on currently or historically farmed land ~~in agricultural areas~~ (Class II)

The sites for peaker power plants could involve former~~ly agricultural~~ farm land ~~areas~~ where there is a potential presence of residual pesticide and herbicide contamination of the soil and/or groundwater. Encountering this contamination represents a significant impact due to the health hazards to construction workers and the public. Available mitigation includes measures similar to SDG&E's APMs for the Proposed Project and Mitigation Measure P-2a (Test for residual pesticides/herbicides). Incorporation of these measures would reduce the impact to a less than significant level (Class II).

Mitigation Measure for Impact P-2: Residual Pesticides and/or Herbicides could be encountered during grading or excavation on currently or historically farmed land~~in agricultural areas~~

P-2a **Test for residual pesticides/herbicides on currently or historically farmed land.**

Impact P-3: Previously unknown soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Construction of the peakers or associated facilities could encounter previously undocumented contamination of soil or groundwater. Unknown existing environmentally contaminated sites could occur at any peaker sites, and unknown contamination may be present in developed areas near linear facilities and in remote areas and roads due to illegal dumping. Additionally the Miramar peaker site is located within the eastern edge of Miramar Corps Air Station boundary and historically areas of Miramar have been used for bombing and munitions testing. There is a potential for lead waste and lead contaminated soil to occur at gun and artillery ranges and bombing and munitions testing areas due to the breakdown of lead ordnance and ammunition in the soil. Mitigation measures similar to SDG&E's APMs for the Proposed Project would be implemented as part of these future projects, including: Mitigation Measure P-2b, mitigation measure P-2c, and Mitigation Measure P-2d which would be implemented as a part of the project in order to reduce the significance of this impact. In addition, mitigation measures P-3a and P-3b would also need to be implemented to reduce the impact to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-2b **Stop work if contamination is detected.**

P-2c **Cordon off contaminated areas.**

P-2d **Notification of regulatory agencies.**

P-3a **Appoint individuals with correct training for sampling, data review, and regulatory coordination.**

P-3b **Documentation of compliance with measures for encountering unknown contamination.**

Impacts P-4: Areas used by the military may contain unexploded ordnance (UXO) and could explode and injure workers or the public during construction (Class II)

The Miramar peaker site is located within the Miramar Marine Corps Air Station boundary. Historically areas of Miramar have been used for bombing and munitions testing. This results in a potential of encountering UXO during excavation for the power plant or linear facilities. This could result in death or injury to workers, a significant impact. Impacts associated with unexploded ordinance would be significant, but Implementation of mitigation measures P-4a and P-4b would reduce the impacts to be less than significant (Class II).

Mitigation Measure for Impact P-4: Areas used by the military may contain unexploded ordnance (UXO) and could explode and injure workers or the public during construction

P-4a **Unexploded ordnance to be removed by trained personnel.**

P-4b **Train project personnel to recognize unexploded ordnance.**

Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites (Class II)

Construction of the peakers or associated facilities could encounter contaminated soil or groundwater and allow it to migrate to currently uncontaminated areas. The Applicant would implement mitigation measures similar to SDG&E's APMs for the Proposed Project to reduce impacts from known contaminated soil and groundwater, including Mitigation Measure P-1g and Mitigation Measure P-7b below. In order to reduce potential health hazards related to exposure of construction personnel and/or the public to

hazardous materials in the soil, groundwater, or surface water to less than significant, the Applicant would implement Mitigation Measure P-7a (Evaluate contaminated sites). This four step mitigation measure would reduce environmental impacts to less than significant (Class II).

Mitigation Measure for Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites

P-1g **Proper storage and disposal of generated waste.**

P-7a **Evaluate contaminated sites.**

P-7b **Conduct Environmental Database Review.~~Investigate contaminated sites~~.**

Public Health and Safety Operational Impacts for Peakers

Operating a peaker plant would involve similar risks to soil or groundwater contamination resulting from an accidental spill of hazardous materials routinely used at a power plant site (Impact P-5), but the potentially adverse affects would be less than significant with mitigation measures similar to SDG&E's APMs for the Proposed Project. Because of diesel fuel transportation to and storage at the alternative Borrego peaker, however, impacts at this site would be adverse and unmitigable to less than significant levels (Class I and II). Herbicides used for vegetation control for project maintenance would cause an adverse impact, but it would be less than significant (Class III).

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class I and II)

The peaker generators at Miramar, Pala, and Margarita Substations would require natural gas and on-site ammonia storage for operation, and the risks caused by these materials would be similar to that of the power plants described above. With adherence to the applicable federal and State regulatory requirements for the design and installation of gas pipelines, as well as implementation of measures similar to SDG&E's APMs for the Proposed Project, the risk of accidental release is anticipated to be less than significant (Class II).

Because of limited natural gas supplies at the Borrego Substation, the site was identified by SDG&E as suitable only for biodiesel (e.g., B20 grade or 20% biodiesel mixed with 80% conventional diesel fuel). This would require on-site fuel storage. Diesel fuel is the hazardous material with the greatest potential for environmental consequences. To minimize the potential for a release, SDG&E shall prepare a Risk Management Plan (RMP) for biodiesel storage and use in accordance with the California Accidental Release Prevention Program (CalARP) regulations. The RMP would include details on injury and illness prevention, fire response, substation safety, and facility standard operating procedures. As required under federal and California regulations, a Hazardous Material Business Plan (HMBP) would be prepared and submitted to the local Certified Unified Program Agency (CUPA) and the San Diego County Fire Department. As peaker operations at the Borrego Substation site would require refueling of on-site storage, U.S. Department of Transportation (DOT) regulations require all tank truck trailers to meet strict requirements for collision and accident protection. The tank trucks are designed to withstand violent accidents without breach of the primary containment. Therefore, while operational activities would result in the use of on-site hazardous materials, compliance with all applicable regulations and the following mitigation measures for emergency action plans would reduce heath and safety hazards, but the impact would significant and unavoidable (Class I).

Mitigation Measure for Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance

P-1c **Personnel trained in proper use and safety procedures for the chemicals used**. Section D.10.11 includes details for these mitigation measures.

P-1e **Preparation of environmental safety plans including spill prevention and response plan.**

P-1g **Proper storage and disposal of generated waste.**

P-~~7a~~9b **Prepare Offsite Consequence Analysis and Emergency Action Plan.**

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

Maintenance workers on peaker sites could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the site may cause dust to become airborne and inhaled. However, considering the generally low toxicity of herbicides used for vegetation management, their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public, the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is a less than significant impact and does not require additional mitigation (Class III).

Overall Public Health and Safety Impacts of the New In-Area All-Source Generation Alternative

Conventional Generation

For any power plant development under the New In-Area All-Source Generation Alternative, the public health and safety impacts during construction; soil or groundwater contamination due to improper handling and/or storage of hazardous materials, encountering residual pesticides and/or herbicides, unknown soil and/or groundwater contamination, or unexploded ordnance (Impact P-1 through Impact P-4 and Impact P-6) would either be less than significant or reduced to a less than significant level with mitigation measures similar to those for the Proposed Project. Implementing Mitigation Measures P-1c and P-6b for site-specific power plant construction wastes (Impact P-1) and site-specific contamination that could be encountered (Impact P-6) would reduce these impacts to a less than significant level (Class II).

Normal operations of the power plants under the New In-Area All-Source Generation Alternative would involve public health and safety impacts to soil and groundwater that would also be less than significant in manner similar to that of the Proposed Project (Impact P-5). There would be an increased risk due to public health and safety hazards from use and storage of hazardous materials (including aqueous ammonia and large volumes of natural gas) at power plant sites, and this impact (Impact P-7) would require additional mitigation (Mitigation Measure P-7a) through emergency action plans (Class I).

Renewable Generation

For overall impacts of the New In-Area Renewable Generation, please see Section E.5 (Solar Photovoltaics, Biomass/Biogas and Wind components).

E.6.11 Air Quality

Air Quality Regulation of Conventional Power Plants

This section deals with the air emissions that would occur as a result of construction and operation of the New In-Area All-Source Generation Alternative, including conventional fossil fuel-fired power plants of varying size and location within San Diego County. The San Diego Air Pollution Control District (SDAPCD) and the California Energy Commission would be the regulating agencies responsible for issuing an Authority to Construct and Permit to Operate for any future potential power plants. Other public health and safety impacts relating to accidental releases of hazardous materials are evaluated in Section E.6.10 (Public Health and Safety).

The New In-Area All-Source Generation Alternative would primarily be located in the San Diego Air Basin, and air quality for this air basin is described in Section D.11.1. Similarly, applicable regulations, plans, and standards identified for the Proposed Project (Section D.11.3) would apply to the New In-Area All-Source Generation Alternative, but because this alternative would involve new stationary sources of air pollution, the additional regulatory programs would be applicable:

- **New Source Review.** SDAPCD Rule 20.3 (New Source Review) implements the federal New Source Review (NSR) and Prevention of Significant Deterioration (PSD) programs, as well as the new source review requirements of the California Clean Air Act. The rule contains the following elements: requirements to implement the Best Available Control Technology (BACT) and Lowest Achievable Emission Rates (LAER); obtaining and surrendering emission offsets; and the requirement to conduct an air quality impact analysis (AQIA). The AQIA required by SDAPCD New Source Review rules would evaluate the site-specific impacts on ambient air quality caused by emission increases from new or modified facilities exceeding any SDAPCD threshold in Rule 20.2(d)(2). Project emissions must not cause a new violation or contribute substantially to an existing violation of any ambient air quality standard. The PSD regulations require an analysis of impacts to visibility (regional haze) and vegetation (acid deposition) and increment consumption for new stationary sources located within 100 km of a federal Class I area (described in Section D.11.3.3). These regulations apply to major new stationary sources, including those that emit at high elevations and from stacks with high flow rates because these are most likely to adversely affect distant areas.
- **California Energy Commission Review.** For thermal power plants over 50 MW, SDAPCD Rule 20.5 establishes a procedure for coordinating SDAPCD review consistent with the California Energy Commission licensing processes.
- **Air Toxic "Hot Spots" Program** (H&SC §44300-44384; 17 CCR §93300-93347). The SDAPCD and CARB review new sources of toxic air contaminants and conduct risk assessments ensuring that cancer risks and hazards caused by new sources do not exceed established thresholds for offsite receptors.
- **Toxic Risk Management** (SDAPCD Rule 1200). Provides a mechanism for evaluating the potential impact of toxic air contaminants (TAC) emitted from any new, modified, and relocated sources in the SDAPCD. The rule requires a demonstration that the source will not exceed the risk thresholds.
- **National Emission Standards for Hazardous Air Pollutants** (Federal Clean Air Act §112, 42 USC §7412). Sets standards for major new sources of hazardous air pollutants.

- **Acid Rain Program** (Title IV of federal Clean Air Act §401, 42 USC §7651). Large electrical generation facilities must enter into an emission control program and comply with limits on sulfur dioxide emissions under SDAPCD and U.S. EPA oversight.
- **Title V Operating Permits Program** (Title V of the federal Clean Air Act §501, 42 USC §7661). Major stationary sources must obtain operating permits and ensure ongoing compliance with SDAPCD and U.S. EPA requirements.
- **New Source Performance Standards for Stationary Combustion Turbines** (40 CFR 60, Subpart KKKK). New stationary gas turbines must limit emissions of NOx and SO_2; for example, the limits for turbines greater than 30 MW are 0.39 lb NOx per MW-hr and 0.58 lb SO_2 per MW-hr.
- **New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines** (40 CFR 60, Proposed Subpart JJJJ). Proposed standard would require gas-fired internal combustion engines to achieve NOx 2.0 grams per horsepower-hour (g/bhp-hr), CO 4.0 g/bhp-hr, and VOC 1.0 g/bhp-hr.
- **New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines** (40 CFR 60, Subpart IIII). Requires new diesel-fired generator engines to meet U.S. EPA Tier 3 requirements.
- **Airborne Toxic Control Measure for Stationary Compression-Ignition Engines** (Title 17, California Code of Regulations, §93115). Diesel engines used for backup or emergency use must meet emission standards set by SDAPCD and CARB.

Section D.11.4 includes a discussion of significance criteria for impacts related to air quality.

Air Quality for SBRP

Baseline Emissions from the Existing SBPP

The existing South Bay Power Plant (SBPP) Units 1 through 4 and the combustion turbine cause emissions of criteria pollutants and toxic air contaminants in the baseline conditions. These sources would be retired as part of the SBRP. The existing SBPP operator estimates that the baseline emissions during the 2004 and 2005 were as shown in Table E.6.11-1.

Table E.6.11-1. Existing Emissions from South Bay Power Plant

Emission Sources	NOx (ton/year)	VOC (ton/year)	PM10 (ton/year)	PM2.5 (ton/year)	CO (ton/year)	SOx (ton/year)
Existing SBPP Baseline	106.5	Approx. 40	69.3	69.3	763.5	6.9

Source: SBRP AFC Table 8.1-24.

Air Quality Construction Impacts for SBRP

Impact AQ-1: Construction would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants (Class I)

Construction of the SBRP would involve preparing the site for the new power plant, developing the power plant, upgrading linear facilities, substation modifications, and demolishing the existing power plant. Over the 28-month construction phase emissions due to the construction activities would include emissions from vehicle and equipment exhaust and the fugitive dust generated by earthwork and

material handling. Criteria pollutant and toxic air contaminant emissions would be generated by the exhaust of the heavy equipment and fugitive dust from activity on unpaved surfaces. The primary toxic air contaminant would be diesel particulate matter from delivery trucks and other heavy equipment. Heavy equipment would include loaders and haul trucks to deliver construction materials, excavators and backhoes for earthwork, graders, cranes, lifts, and smaller equipment such as welders, generators, and air compressors. Fugitive dust emissions would occur due to activity on the exposed surfaces at the site, especially those portions that are unpaved. Equipment emissions and fugitive dust emissions would also occur offsite on transport routes and the corridors for the linear facilities. The total amount of construction, the duration of construction, and the intensity of construction activity would have a substantial effect upon the amount of construction emissions, the concentrations, and the resulting impacts occurring at any one time. Exact construction scenarios are unavailable at this level of alternative analysis, and no emission forecasts are provided for the expected construction scenario.

The emissions due to power plant construction are generally unavoidable. Direct impacts of criteria pollutants could cause or contribute to a violation of the ambient standards for particulate matter and ozone. Significant impacts would occur for PM10 and ozone because construction emissions of particulate matter and precursors and ozone precursors would contribute to existing violations of these standards. Additionally, the dominant emission with potential for health risks would be diesel particulate matter from use of diesel fuel by equipment (e.g., cranes, dozers, excavators, graders, front-end loaders, backhoes), which could adversely nearby residential land uses.

The construction emissions would exceed the thresholds and result in a significant impact. Available mitigation would include Mitigation Measures AQ-1a and AQ-1b for dust control and controlling equipment exhaust, respectively, and measures incorporating SDG&E's relevant APMs listed in Table D.11-10. However, with mitigation, construction-phase emissions would still exceed the local significance thresholds and could expose sensitive receptors to substantial pollutant concentrations (Class I). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measures for Impact AQ-1: Construction would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants

AQ-1a **Suppress dust at all work or staging areas and on public roads.**

AQ-1b **Use low-emission construction equipment.**

AQ-1d **Implement dust reduction measures.** [AQ-APM-2]

AQ-1e **Prevent transport of mud and dust.** [AQ-APM-3]

AQ-1f **Encourage carpooling.** [AQ-APM-4]

AQ-1g **Minimize vehicle idling.** [AQ-APM-5]

AQ-1h **Obtain NOx and particulate matter emission offsets.**

Air Quality Operational Impacts for SBRP

Impact AQ-2: Operation, maintenance, and inspections would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants (Class III)

Dust and exhaust emissions would be generated during day-to-day operation, maintenance, and inspection of the SBRP facility because the power plant would cause workers to travel to and from the power plant site, and occasional deliveries of materials (e.g., aqueous ammonia) would occur. Emissions from these new vehicle trips would be minor. Direct emissions from vehicular traffic for maintenance activities would cause an adverse but less than significant impact, and mitigation measures are not required (Class III).

Impact AQ-3: Power generated during transmission line operation would cause emissions from power plants (Class I)

The SBRP would cause criteria pollutant emissions and toxic air contaminants from combustion by-products produced by the combined cycle units, auxiliary boiler, and emergency fire pump engine. Another source of combustion pollutants would be the routine testing and maintenance of the diesel-fueled emergency fire water pump engine. Greenhouse gases would also be emitted with the fossil fuel combustion (see Impact AQ-4). The SBRP would fire exclusively natural gas, and it would be fitted with the Best Available Control Technology that would be determined by the SDAPCD through the New Source Review Program, most likely involving selective catalytic reduction (SCR) and possibly an oxidation catalyst.

The new power plant would replace the existing facility which is generally much less fuel efficient. Although the SBRP would cause less emissions per electrical output when compared to the existing SBPP, the new SBRP, like the existing SBPP, would be a major source of emissions of NOx and CO. Contemporaneous emission reductions would be achieved with the shut-down of the existing SBPP, but commissioning of the new power plant would need to occur in conjunction with operating the existing SBPP, which could result in a short period of emissions greater than those currently occurring with SBPP alone. Developing SBRP could also lead to decreased emissions from power plants outside of San Diego County (in Mexico and Arizona) because while demand for electricity would not change as a result of the SBRP, SBRP would locally generate power that might otherwise be imported from outside San Diego. The emissions reductions from SBPP shut-down and the new SBRP according to the application filed for SBRP are shown in Table E.6.11-2.

Table E.6.11-2. Potential Net Emissions from Existing South Bay Power Plant and SBRP

Emission Sources	NOx (ton/year)	VOC (ton/year)	PM10 (ton/year)	PM2.5 (ton/year)	CO (ton/year)	SOx (ton/year)
Existing SBPP Shut-down	–106.5	Approx. –40	–69.3	–69.3	–763.5	–6.9
Maximum Proposed SBRP	104.0	39.6	69.2	69.2	544.6	11.0

Source: SBRP AFC Table 8.1-24.

Potential health risks from power plant emissions would occur almost entirely by direct inhalation. The nearest sensitive receptors are the Harborside Elementary School located 0.50 miles from the SBRP site at 681 Naples Street, and the Chula Vista Christian Elementary School, Options Secondary School, and Southwestern Christian School and Daycare are each located approximately 1.0 mile from the site. The adverse cancer, or short-term or long-term non-cancer health effects from any new power plant would need to be reviewed as part of the New Source Review process. Experience with other proposals similar to SBRP demonstrates that the maximum cancer risk at the point of maximum impact would most likely be less than 10 in one million and that acute and chronic health hazards would most likely be insignificant, but making a definitive conclusion would require a detailed site-specific analysis.

The human health impacts associated with SBRP operations stem from exposure to air emissions of ammonia, formaldehyde, benzene, toluene, xylene, and other volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs) that routinely occur from combustion of natural gas and control of emissions with ammonia in the selective catalytic reduction systems. Diesel particulate matter also would occur from combustion of diesel fuel in the emergency fire water pump engine. These toxic air contaminants could cause adverse impacts at nearby residential land uses and schools.

The emissions due to fossil fuel-fired power plant operation are generally unavoidable. Direct impacts of criteria pollutants could cause or contribute to a violation of the ambient air quality standards. Significant impacts would occur for PM10 and ozone because emissions of particulate matter and precursors and ozone precursors would contribute to existing violations of the PM10 and ozone standards. Power plant emissions could also adversely affect visibility and vegetation in federal Class I areas or State wilderness areas, which would significantly deteriorate air quality related values (AQRVs) in the wilderness areas. Toxic air contaminants from routine operation would also cause health risks that could locally adversely affect sensitive receptors. Additional mitigation would be required for offsetting any emissions of PM10 and ozone precursors (Mitigation Measure AQ-3a, introduced in Section E.5.11). This would be achieved for ozone precursors through New Source Review requirements; however, since emission trading programs for PM10 and PM10 precursors (including SO_2) are not formally active in San Diego County, the impact of the emissions would remain significant and unavoidable (Class I).

Mitigation Measure for Impact AQ-3: Power generated during transmission line operation would cause emissions from power plants

AQ-3a **Offset emission increases of PM10 and ozone precursors.**

Impact AQ-4: Project activities would cause a net increase of greenhouse gas emissions (Class I)

Greenhouse gas emissions would occur during construction of the SBRP as well as from operation of the power plant, as described in Impact AQ-3. The GHG emissions associated with construction and operation of SBRP would be somewhat offset by reductions at existing generators that would otherwise provide power to the region. However, the indirect emission reductions at existing power plants outside the region would not be sufficient to fully offset the direct GHG emission increase that would occur as a result of SBRP (CAISO, ~~2007~~2008). The increased power output provided by San Diego area natural gas-fired power plants under this alternative would occur at a level exceeding the CPUC Greenhouse Gas Emissions Performance Standard of 0.5 metrics tons (1,100 lb) of CO_2 per megawatt-hour, resulting in a significant impact. This is based on a CAISO forecast that shows 2,571 million pounds of CO_2 would be produced in the course of generating 2.206 million megawatt-hours in San Diego in 2015, resulting in roughly 1,165 lb of CO_2 per megawatt-hour (CAISO, ~~2007~~2008). Mitigation Measure AQ-4d would require offsetting the power plant GHG emissions, but, as described in Section D.11 (Air Quality), offset markets are not fully formed or regulated, and the relationship of credits to real GHG reductions is not uniformly enforceable. Along with direct GHG emissions from fossil fuel combustion during power plant construction and operation, electrical equipment associated with new transmission system connections for SBRP would also result in the potential escape of sulfur hexafluoride (SF_6), a potent GHG. These GHG impacts would be significant because they would exceed those of the baseline conditions, and an overall net increase of GHG emissions would occur. Mitigation would reduce the GHG impact but not to a less than significant level (Class I).

Mitigation Measures for Impact AQ-4: Project activities would cause a net increase of greenhouse gas emissions

AQ-4a **Offset construction-phase greenhouse gas emissions with carbon credits.**

AQ-4b **Offset operation-phase greenhouse gas emissions with carbon credits.**

AQ-4c **Avoid sulfur hexafluoride emissions.**

AQ-4d **Offset greenhouse gas emissions from power generation with carbon credits.** The power plant operator shall obtain and hold sufficient carbon credits to fully offset operational-phase greenhouse gas emissions. The power plant operator shall annually report to the CPUC the status of efforts to obtain banked credits and the quantity of greenhouse gas emissions offset by credits.

Air Quality for SDCPP

Section D.11.1 provides the regional air quality setting for San Diego County, and Section E.6.11 provides information on air quality regulation of conventional power plants.

Air Quality Construction Impacts for SDCPP

Impact AQ-1: Construction would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants (Class I)

Construction of the SDCPP would create impacts similar to those caused by construction of the SBRP, described above. Emission-generating activities include developing the power plant and ancillary linear facilities (i.e., transmission lines, pipelines for water, natural gas, etc.). Construction of the SDCPP would result in emissions for approximately 24 months. All construction activities would include site preparation including cleaning, grading, and excavation. Fugitive dust from these activities would be emitted primarily during the preparation, grading, and excavating of the site; however, construction vehicles traveling to and from the site would also create fugitive dust emissions. Combustion emissions of criteria pollutants, and toxic air contaminants from all construction equipment and vehicles would also be emitted. Because the total amount of construction, the duration of construction, and the intensity of construction activity would influence the amount of construction emissions and the resulting impacts occurring at any one time and because exact construction scenarios are unavailable at this level of alternative analysis, no emission forecasts are provided for the expected construction scenario.

Direct impacts of criteria pollutants could cause or contribute to a violation of the ambient standards for particulate matter and ozone. Significant impacts would occur for PM10 and ozone because construction emissions of particulate matter and precursors and ozone precursors would contribute to existing violations of these standards. Additionally, the dominant emission with potential for health risks would be diesel particulate matter from use of diesel fuel by equipment (e.g., cranes, dozers, excavators, graders, front-end loaders, backhoes). The construction emissions would exceed the thresholds and result in a significant impact. Available mitigation would include Mitigation Measures AQ-1a and AQ-1b for dust control and controlling equipment exhaust, respectively, and measures incorporating SDG&E's relevant APMs listed in Table D.11-10. However, with mitigation, construction-phase emissions would still exceed the local significance thresholds and could expose sensitive receptors to substantial pollutant concentrations (Class I).

Mitigation Measures for Impact AQ-1: Construction would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants

AQ-1a **Suppress dust at all work or staging areas and on public roads.**

AQ-1b **Use low-emission construction equipment.**

AQ-1d **Implement dust reduction measures.** [AQ-APM-2]

AQ-1e **Prevent transport of mud and dust.** [AQ-APM-3]

AQ-1f **Encourage carpooling.** [AQ-APM-4]

AQ-1g **Minimize vehicle idling.** [AQ-APM-5]

AQ-1h **Obtain NOx and particulate matter emission offsets.**

Air Quality Operational Impacts for SDCPP

Impact AQ-2: Operation, maintenance, and inspections would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants (Class III)

The incremental increase of emissions that would be caused by day-to-day project vehicular traffic for operation, maintenance, and inspection of SDCPP would be minor and less than significant. Direct emissions from project vehicular traffic for maintenance activities would cause an adverse but less than significant impact, and mitigation measures are not required (Class III).

Impact AQ-3: Power generated during transmission line operation would cause emissions from power plants (Class I)

Operation of the SDCPP would generate criteria air pollutants and toxic air contaminants that would impact local and regional air quality in a manner similar to the impacts that would be caused by SBRP (elsewhere in Section E.6.11). Exact operational scenarios and emissions quantification are unavailable at this time; therefore, no emission forecast is provided in this analysis of SDCPP. However, significant levels of emissions would occur because maximum SDCPP emissions would be roughly similar to those shown for SBRP in Table E.6.11-2. Power plant emissions could adversely affect visibility and vegetation in federal Class I areas or State wilderness areas, which would significantly deteriorate AQRVs in the wilderness areas. Direct impacts of criteria pollutants could cause or contribute to a violation of the ambient standards for particulate matter and ozone, and toxic air contaminants from routine operation would cause health risks that could locally adversely affect nearby residential uses in the City of Santee. With mitigation identified below, this impact would be reduced, but it would remain significant and unavoidable (Class I).

Mitigation Measure for Impact AQ-3: Power generated during transmission line operation would cause emissions from power plants

AQ-3a Offset emission increases of PM10 and ozone precursors.

Impact AQ-4: Project activities would cause a net increase of greenhouse gas emissions (Class I)

Greenhouse gas emissions would occur during construction of the SDCPP as well as from operation of the power plant. The GHG emissions associated with construction and operation of SDCPP would be somewhat offset by reductions at existing generators that would otherwise provide power to the region. However, as described for SBRP (elsewhere in Section E.6.11), the CAISO forecast for SBRP indicates new In-Area natural gas-fired generation would cause GHG emission increases that would not be fully offset by indirect emission reductions at existing power plants outside San Diego County (CAISO, ~~2007~~2008). This would lead to a net increase in GHG emissions and a significant impact. Mitigation measure AQ-4d would require offsetting the power plant GHG emissions, but, as described in Section D.11 (Air Quality), offset markets are not fully formed or regulated, and the relationship of credits to real GHG reductions is not uniformly enforceable. Along with direct GHG emissions from fossil fuel combustion during power plant construction and operation, electrical equipment associated with new transmission system connections for SDCPP would also result in the potential escape of sulfur hexafluoride (SF_6), a potent GHG. These GHG impacts would be significant because they would exceed those of the baseline conditions, and an overall net increase of GHG emissions would occur. Mitigation would reduce the GHG impact but not to a less than significant level (Class I).

Mitigation Measures for Impact AQ-4: Project activities would cause a net increase of greenhouse gas emissions

AQ-4a Offset construction-phase greenhouse gas emissions with carbon credits.

AQ-4b Offset operation-phase greenhouse gas emissions with carbon credits.

AQ-4c Avoid sulfur hexafluoride emissions.

AQ-4d Offset greenhouse gas emissions from power generation with carbon credits.

Air Quality for Peakers

Air Quality Setting for Peakers

Miramar, Pala, and Borrego Springs Substations. These potential peaker sites are located in San Diego County under the jurisdiction of the SDAPCD. Section D.11.1 provides the regional air quality setting for San Diego County.

Margarita Substation. The existing Margarita Substation is located in Orange County within the South Coast Air Basin (SCAB) and is under jurisdiction of the South Coast Air Quality Management District (SCAQMD). A summary of the air quality status of the SCAB, relative to the National and State Ambient Air Quality Standards is provided in Table E.6.11-3.

Table E.6.11-3. Attainment Status for Orange County

	Ozone		PM10		PM2.5		CO		NO_2		SO_2	
Air Basin	State	Federal	State	Federal	State	Federal	State	Federal	State	Federal	State	Federal
Orange County[41]	N	N (Severe)	N	N (Serious)	N	N	A	N	A	A	A	A

Note: A = Attainment of Ambient Air Quality Standards; U/A = Unclassified/Attainment; N = Nonattainment.

Air Quality Construction Impacts for Peakers

Impact AQ-1: Construction would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants (Class I)

Construction of the peaker generators would have the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from each site. In addition, fugitive dust emissions would result from excavation and construction activities. Mobile-source emissions of criteria pollutants, primarily NOx, toxic air contaminants, primarily diesel particulate matter, would result from the use of construction equipment, such as excavators, bulldozers, wheeled loaders, and cranes. Because the total amount of construction, the duration of construction, and the intensity of construction activity would influence the amount of construction emissions and the resulting impacts occurring at any one time and because exact construction scenarios are unavailable at this level of alternative analysis, no emission forecasts are provided for the expected construction scenario

[41] South Coast Air Quality Management District (SCAQMD). 2006 State Area Designations. Website accessed May 4, 2007. http://www.arb.ca.gov/desig/adm/adm.htm#state.

Direct impacts of criteria pollutants could cause or contribute to a violation of the ambient standards for particulate matter and ozone. Significant impacts would occur for PM10 and ozone because construction emissions of particulate matter and precursors and ozone precursors would contribute to existing violations of these standards. Additionally, the dominant emission with potential for health risks would be diesel particulate matter from use of diesel fuel by equipment (e.g., cranes, dozers, excavators, graders, front-end loaders, backhoes). The construction emissions would exceed the thresholds and result in a significant impact. Available mitigation would include Mitigation Measures AQ-1a and AQ-1b for dust control and controlling equipment exhaust, respectively, and measures incorporating SDG&E's relevant APMs listed in Table D.11-10. However, with mitigation, construction-phase emissions would still exceed the local significance thresholds and could expose sensitive receptors to substantial pollutant concentrations (Class I).

Mitigation Measures for Impact AQ-1: Construction would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants

AQ-1a **Suppress dust at all work or staging areas and on public roads.**

AQ-1b **Use low-emission construction equipment.**

AQ-1d **Implement dust reduction measures.** [AQ-APM-2]

AQ-1e **Prevent transport of mud and dust.** [AQ-APM-3]

AQ-1f **Encourage carpooling.** [AQ-APM-4]

AQ-1g **Minimize vehicle idling.** [AQ-APM-5]

AQ-1h **Obtain NOx and particulate matter emission offsets.**

Air Quality Operational Impacts for Peakers

Impact AQ-2: Operation, maintenance, and inspections would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants (Class III)

Day-to-day operation, maintenance, and inspection of the peaker power plants would not require a substantial number of new vehicle trips compared to the existing conditions. Few new permanent employees would be needed to operate the peakers, which means that the change in emissions from worker commute trips would be minor. The incremental increase of emissions that would be caused by project vehicular traffic for inspection and maintenance activities, including occasional aqueous ammonia or liquid fuel delivery, would be minor and less than the thresholds for operation significance in Table D.11-8. Direct emissions from project vehicular traffic for maintenance activities would cause an adverse but less than significant impact, and mitigation measures are not required (Class III).

Impact AQ-3: Power generated during transmission line operation would cause emissions from power plants (Class I)

Emissions of criteria pollutants and toxic air contaminants associated with peaker generator operations would occur as a result of the combustion of natural gas and other fuels required for equipment operation. Pollutant emissions associated with electricity generation (i.e., fuel and natural gas consumption) would be similar to those described for SBRP, and these emissions would be subject to permitting through the New Source Review program. Exact operational scenarios and emission forecasts are unavailable at this level of analysis. However, based on the application filed by Orange Grove Energy, L.P. in July 2007, significant levels of emissions would occur when the four peaker power plants are considered together.

Table E.6.11-4. Estimated Emissions from Peaker Power Plants

Emission Sources	NOx (ton/year)	VOC (ton/year)	PM10 (ton/year)	PM2.5 (ton/year)	CO (ton/year)	SOx (ton/year)
Pala Peaker (96 MW)	16.7	4.1	9.7	9.7	22.0	2.7
Margarita Peaker (99 MW, est.)	17.2	4.2	10.0	10.0	22.7	2.8
Borrego Peaker (15 MW, est.)	2.6	0.6	1.5	1.5	3.4	0.4
Miramar II Peaker (49 MW, est.)	8.5	2.1	5.0	5.0	11.2	1.4

Source: Orange Grove Project SPPE Application, July 2007; with estimates based on a factor of annual tons divided by output capacity.

Direct impacts of criteria pollutants could cause or contribute to a violation of the ambient standards for particulate matter and ozone, and toxic air contaminants from routine operation would cause health risks that could locally adversely affect residential uses near the peaker sites, especially to the west of Margarita. With mitigation identified below, this impact of peaker power plant operations would be reduced, but it would remain significant and unavoidable (Class I).

Mitigation Measure for Impact AQ-3: Power generated during transmission line operation would cause emissions from power plants

AQ-3a Offset emission increases of PM10 and ozone precursors.

Impact AQ-4: Project activities would cause a net increase of greenhouse gas emissions (Class I)

Greenhouse gas emissions would occur during peaker power plant construction and operation. The GHG emissions associated with construction and operation of the peakers would be somewhat offset by reductions at existing generators that would otherwise provide power to the region. However, similar to the impact described for SBRP and SDCPP (elsewhere in Section E.6.11), a net increase in GHG emissions could occur. The GHG emission increases during peaker power plant construction would represent an increase over baseline conditions, and could lead to a significant impact. Mitigation Measure AQ-4d would require offsetting the power plant GHG emissions, but, as described in Section D.11 (Air Quality), offset markets are not fully formed or regulated, and the relationship of credits to real GHG reductions is not uniformly enforceable. Along with direct GHG emissions from fossil fuel combustion during power plant construction and operation, electrical equipment associated with new transmission system connections for the peakers would also result in the potential escape of sulfur hexafluoride (SF_6), a potent GHG. These GHG impacts would be significant because they would exceed those of the baseline conditions, and an overall net increase of GHG emissions could occur. Mitigation would reduce the GHG impact but not to a less than significant level (Class I).

Mitigation Measures for Impact AQ-4: Project activities would cause a net increase of greenhouse gas emissions

AQ-4a Offset construction-phase greenhouse gas emissions with carbon credits.

AQ-4b Offset operation-phase greenhouse gas emissions with carbon credits.

AQ-4c Avoid sulfur hexafluoride emissions.

AQ-4d Offset greenhouse gas emissions from power generation with carbon credits.

Overall Air Quality Impacts of the New In-Area All-Source Generation Alternative

Conventional Generation

For any power plant development under the New In-Area All-Source Generation Alternative, the air quality impacts during construction (Impact AQ-1) would be significant and unavoidable with Implementation of mitigation measures similar to those required for the Proposed Project (Class I).

Normal operations of the power plants under the New In-Area All-Source Generation Alternative would cause minor emissions from workers visiting the power plants (Impact AQ-2, Class III). There would be increased overall air quality impacts, however, because fossil fuel-fired power plants would contribute to local violations of PM10 and ozone ambient air quality standards, and operational emissions could result in toxic air contaminants that could adversely affect sensitive receptors (Impact AQ-3); this impact would require Mitigation Measure AQ-3a for the PM10 and ozone impacts, but the impact would remain significant and unavoidable (Class I). The net increases in GHG emissions due to fossil fuel-firing in the conventional power plants would also be significant and unavoidable (Impact AQ-4, Class I).

Renewable Generation

For overall impacts of the New In-Area Renewable Generation, please see Section E.5 (Solar Photovoltaics, Biomass/Biogas and Wind components).

E.6.12 Water Resources

In general, water resources for New In-Area All-Source Generation are typical of the San Diego region. Climate, terrain and surface and groundwater are very similar to those described for the Coastal Link in Sections D.12.1 and D.12.2.

Water Resources Regulation for Conventional Power Plants

Up to 90 percent of the San Diego region's water is imported from the Colorado River and Northern California by a single supplier, the Metropolitan Water District of Southern California (MWD). The rest comes from local water sources including groundwater, local surface water, recycled water, seawater desalination and conservation. The Water Authority has five major pipelines with the maximum capacity to carry 925 million gallons a day. These pipelines bring either treated or untreated water into San Diego County from the Metropolitan Water District. The San Diego County Water Authority purchases water from MWD and delivers it to its member agencies through two aqueducts containing five large-diameter pipelines. The aqueducts follow general north-to-south alignments, and the water is delivered largely by gravity. Delivery points from MWD are located south of the Riverside–San Diego County line.

Stormwater drainage facilities within San Diego County are regulated and operated by the County of San Diego Department of Public Works Watershed Protection (Stormwater and Flood Control) Department.[42] The County of San Diego Standard Urban Stormwater Mitigation Plan for Land Development and Public Improvement Projects (SUSMP) is intended to help implement one part of the County's stormwater program.[43] The SUSMP only addresses land development and capital improvement projects. It is focused on project design requirements and related post-construction requirements, not on the construction process itself.

The California Water Code (§§ 13552.6 and 13552.8) specifically identifies the use of potable domestic water for evaporative cooling towers as a waste or unreasonable use of water, if the State Water Resources Control Board (SWRCB) determines that suitable reclaimed water is available. The availability of reclaimed water is determined based on criteria listed in Water Code Section 13550. Those criteria include provisions that the quality and quantity of the reclaimed water are suitable for the use, the cost is reasonable, the use is not detrimental to public health, and the use will not impact downstream users or biological resources.

The SWRCB has adopted policies (Resolution 75-58) that provide guidelines for water quality protection. The principal policy of the SWRCB that specifically addresses the siting of energy facilities is the Water Quality Control Policy on the Use and Disposal of Inland Waters Used for Powerplant Cooling (adopted by the Board on June 19, 1975 as Resolution 75-58). This policy states that fresh inland waters should only be used for power plant cooling if other sources or other methods of cooling would be environmentally undesirable or economically unsound. This SWRCB policy requires that power plant cooling water should come from, in order of priority: wastewater being discharged to the ocean, ocean water, brackish water from natural sources or irrigation return flow, inland waste waters of low total dissolved solids, and other inland waters. This policy also includes cooling water discharge prohibitions such as land application.

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[42] County of San Diego Department of Public Works Watershed Protection (Stormwater and Flood Control) Department, 2007. Information website: http://www.sdcounty.ca.gov/dpw/watersheds/stormwater.html. Accessed on May 9.

[43] Ibid.

Water Resources for SBRP

Water Use for the Existing SBPP

The existing South Bay Power Plant uses water drawn from the bay for cooling ("once-through cooling" system). This system brings water directly from San Diego Bay, which cycles once through the power plant system before being discharged to the effluent channel in the Bay. The intake and discharge of this water is closely monitored and is within applicable guidelines and regulations, but decommissioning the SBPP would cease operation of the once-through cooling system.

The San Diego Unified Port District implements a municipal stormwater NPDES Permit for the SBRP site. Article 10 of the San Diego Unified Port District Code (Ordinance 2105, Stormwater Management and Discharge Control) sets forth uniform requirements and prohibitions for stormwater discharges. The Port has developed a model Standard Urban Storm Water Mitigation Plan (SUSMP) to reduce pollutants and runoff flows from all new development and significant redevelopment projects falling under the priority project categories. Construction and operation of SBRP would fall into the category of "redevelopment" and would follow the guidelines outlined in the SUSMP.

Water Resources Construction Impacts for SBRP

Impact H-1: Construction activity could degrade water quality due to erosion and sedimentation (Class II)

Construction of the SBRP would disturb construction laydown, worker parking areas, and existing South Bay Power Plant facilities (including cooling water intake facilities with a direct connection to the San Diego Bay). Surface water impacts would be related primarily to short-term demolition of on-site structures and construction activity including excavation and grading, when increased turbidity due to erosion of newly excavated or placed soils could occur. Construction of the underground linear facilities would also require trench excavation and grading.

Activities such as grading can potentially increase rates of erosion during construction and can contaminate runoff or groundwater if not properly controlled. Disturbance of soil during construction could result in soil erosion and lowered water quality through increased turbidity and sediment deposition into local streams. Several surface waterbodies present within one mile of the SBRP site could be affected including: the San Diego Bay, Telegraph Canyon Creek, and the Otay River.

Available mitigation measures include H-1c (Minimize construction and maintenance disturbance to riparian areas,) H-1d (Avoid watercourses to the maximum extent possible), H-1e (Identify and mark sensitive areas for avoidance,) and H-1f (Develop and Implement Best Management Practices.) A construction SWPPP will be required in compliance with the California general permit for construction activities. Mitigation measure H-1a (Grading and drainage plan; construct during the dry season) would be required to reduce this impact. The grading and drainage plan would include best management practices for erosion control during construction and after construction (for instance slope stabilization). With recommended mitigation, degradation of water quality due to erosion and sedimentation would be reduced to less than significant levels (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measures for Impact H-1: Construction activity could degrade water quality due to erosion and sedimentation (Class II)

H-1a **Prepare Substation Grading and Drainage Plan.** ~~Construction shall be during the dry season. Prior to construction of new substations a grading and drainage plan, with SWPPP for construction and post construction BMPs shall be prepared and submitted to the CPUC and RWQCB for review and approval. All grading for the substation shall occur during the dry season months. Approved drainage control and erosion control BMPs shall be in place prior to the normal onset of winter rains.~~

H-1c **Minimize construction and maintenance disturbance to riparian areas.** [WQ-APM-1]

H-1d **Avoid watercourses to the maximum extent possible.** [WQ-APM-2]

H-1e **Identify and mark sensitive areas for avoidance.** [WQ-APM-3]

H-1f **Develop and implement construction Best Management Practices.** [WQ-APM-4]

Impact H-2: Construction activity could degrade water quality through spills of potentially harmful materials (Class II)

Accidental spills or disposal of potentially harmful materials used during construction could wash into and pollute surface waters and/or groundwater. Materials that could potentially contaminate the construction area or spill or leak include lead-based paint flakes, diesel fuel, gasoline, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, and other fluids. Available mitigation measures include H-2a (Testing and treatment of groundwater before disposal,) H-2b (No storage of fuels and hazardous materials near sensitive water resources,) and H-2c (Proper disposal and clean-up of hazardous material) and Mitigation Measures P-1a (Implement Environmental Monitoring Plan) and Mitigation Measure P-1b (Maintain emergency spill supplies and equipment). With these measures, degradation of water quality through the spill of potentially harmful materials would be reduced to less than significant levels (Class II).

Mitigation Measures for Impact H-2: Construction activity could degrade water quality through spills of potentially harmful materials (Class II)

H-2a **Groundwater testing and treatment before disposal.** [WQ-APM-8]

H-2b **No storage of fuels and hazardous materials near sensitive water resources.** [WQ-APM-9]

H-2c **Proper disposal and clean-up of hazardous materials.** [WQ-APM-13]

P-1a **Implement Environmental Monitoring Program.**

P-1b **Maintain emergency spill supplies and equipment.**

Impact H-3: Excavation could degrade groundwater quality in areas of shallow groundwater (Class II)

Degradation of groundwater due to excavation could occur during construction of the SBRP. The SBRP site is within the Sweetwater Valley Groundwater Basin. The Sweetwater Valley Groundwater Basin underlies an alluvial valley that empties into San Diego Bay. Depth to groundwater at the SBRP site is shallow. Excavation for the power plant foundation or linear facilities could encounter shallow groundwater, which would cause adverse affects to groundwater quality. Available mitigation measures include H-2a (Groundwater testing and treatment before disposal,) and H-3a (Detect and avoid groundwater with project excavations.) With these measures in place, the impacts to groundwater quality would be less than significant (Class II).

Mitigation Measures for Impact H-3: Excavation could degrade groundwater quality in areas of shallow groundwater (Class III)

H-2a **Groundwater testing and treatment before disposal.** [WQ-APM-8]

H-3a **Detect and avoid groundwater with project excavations.** [WQ-APM-11]

Impact H-4: Groundwater dewatering for project construction could deplete local water supplies (Class II)

Dewatering for power plant construction could result in a local and temporary drawdown of local groundwater levels and temporarily reduce the yield of nearby water supply wells. Mitigation measure H-4a requires identification of these wells and provision of alternate water supplies during the period of depletion, which makes this impact less than significant (Class II).

Mitigation Measure for Impact H-4: Groundwater dewatering for project construction could deplete local water supplies (Class III)

H-4a **Avoid using source water and provide alternative sources where avoidance is not possible.** [WQ-APM-6]

Water Resources Operational Impacts for SBRP

The SBRP component of the New In-Area All-Source Generation Alternative would not involve notable linear facilities that could be subject to damage from stream scour. As a result, impacts of linear facilities crossing stream channels (Impact H-8) would not occur.

Impact H-5: Creation of new impervious areas could cause increased runoff resulting in flooding or increased erosion downstream (Class III)

Any new power plant development would result in additional runoff through creation of new impervious areas and compaction of soils. Impervious areas and compacted soils generally have higher runoff coefficients than natural areas, and increased flood peaks are a common occurrence in developed areas.

The developed portion of the SBRP site and relocated substation site would be surfaced with either asphalt pavement or aggregate surfacing. The entire site would include a buffer along its west side and transmission easement on the east side, with permeable surfaces. Site drainage in the developed area would be based on a system of swales and culverts leading to a stormwater detention basin[44] routed through a box culvert and into a discharge channel which connects to an existing ditch leading to the San Diego Bay. Since the site runoff will be run through a detention basin, and then directly into San Diego Bay (the Pacific Ocean), increases in runoff peaks and volumes are less than significant (Class III).

Impact H-6: Transmission towers or other aboveground project features located in a floodplain or watercourse could result in flooding, flood diversions, or erosion (Class II)

Locating structures in a flow path or floodplain could cause flooding of or erosion damage to the encroaching structure, diversion of flows and increased flood risk for adjacent properties (currently undeveloped) or increased erosion on adjacent property. An adverse impact would only occur where permanent project features are constructed in or closely adjacent to a watercourse.

[44] The stormwater detection basin is sized to accommodate stormwater flows from both the SBRP site and the relocated South Bay Substation site.

The SBRP site is not located within the 100-year floodplain as defined by the Federal Emergency Management Agency (FEMA, 1997). A small portion of the site is within areas of the 500-year floodplain or areas that may be subject to shallow flooding from a 100-year flood. The SBRP site is located inside of the area of potential tsunami inundation identified in the San Diego County Multi-Hazard Mitigation Plan. Available Mitigation Measure H-1i would require avoidance of stream channels. Because the SBRP site would not be located in a floodplain or watercourse, this impact would be less than significant (Class II).

Mitigation Measure for Impact H-6: Transmission towers or other aboveground project features located in a floodplain or watercourse could result in flooding, flood diversions, or erosion (Class II)

H-1i **Construction routes to avoid and minimize disturbance to stream channels.** [WQ-APM-15]

Impact H-7: Accidental releases of contaminants from project facilities could degrade water quality (Class II)

Oil and other contaminants in use at any power plant could be released accidentally and contaminate local surface water or groundwater. Such a release would be unlikely with properly designed wastewater facilities. Process and sanitary wastewater at SBRP would be discharged to an existing sewer line along Bay Boulevard, and SBRP would use existing sewer capacity allocated to the South Bay Power Plant. Total maximum wastewater discharges would be approximately 83,500 gallons per day (gpd), or about 58 gpm, which would not exceed the existing maximum permitted sewer discharge for the South Bay Power Plant. No process wastewater would be discharged from the site as stormwater runoff. Reject water from the reverse osmosis/deionization process would be discharged to the sanitary sewer. All discharges from other non-potable plant uses would be routed through and oil water separator and discharges to the sanitary sewer.

Available mitigation measures would include H-2b (No storage of fuels and hazardous materials near sensitive water resources,) and H-2c (Requiring the clean-up of spills and disposal of contaminants.) With these measures and Mitigation Measure H-7a (Develop Hazardous Substance Control and Emergency Response Plan for project operation), the potential for accidental releases to degrade water quality would be less than significant (Class II).

Mitigation Measures for Impact H-7: Accidental releases of contaminants from project facilities could degrade water quality (Class II)

H-2b **No storage of fuels and hazardous materials near sensitive water resources.** [WQ-APM-9]

H-2c **Proper disposal and clean-up of hazardous materials.** [WQ-APM-13]

H-7a **Develop Hazardous Substance Control and Emergency Response Plan for project operation.**

Impact H-9: Project construction or operation would potentially impact local water supply (Class III)

The SBRP would not make any new direct use of groundwater resources or substantial use of local water supply. For the SBRP operations, water would be used primarily as the makeup supply to the steam cycle, and also for plant facilities and onsite worker use (e.g., drinking water and sanitary use). Maximum daily and annual water demands are expected to be 80 gallons per minute (gpm) and 129 acre-foot per year, respectively. Potable water would be supplied to the site from an existing 10-inch water main along Bay Boulevard. The source of this water would be the Sweetwater Authority. The water demand for SBRP would not substantially affect local water supplies (Class III).

Water Resources for SDCPP

Water Resources Setting for SDCPP

Table E.6.12-1 lists surface water resources in the vicinity of the project site. The San Diego River Valley Basin underlies the project area.

Table E.6.12-1. Surface Water Resources – SDCPP

Watercourse	Associated Groundwater Basin	FEMA Flood Hazard Area
Quail Creek	San Diego River Valley	Mapped
Sycamore Canyon Creek	San Diego River Valley	Mapped
West Sycamore Canyon Creek	San Diego River Valley	Mapped
Unnamed stream	San Diego River Valley	Mapped
Unnamed stream	San Diego River Valley	Mapped

The closest existing interconnection to City of San Diego Municipal Water District's water supply is approximately 1,000 feet east of the southern boundary of the project site. A pipeline would be constructed as described in Section E.6.1.3. No water source or route for a water pipeline has been defined for this alternative component, but all water would be supplied by the municipal water district. Section E.6.14 describes public utilities that would be affected by SDCPP.

Construction and Operational Impacts

Section D.12.4 includes a discussion of significance criteria for impacts related to water resources.

Water Resources Construction Impacts for SDCPP

Water resources construction impacts for SDCPP would be similar to those that would occur for SBRP. For any power plant, construction activity could degrade water quality through erosion or spills of potentially harmful materials (Impacts H-1 and H-2, Class II), and excavation could degrade groundwater quality in areas of shallow groundwater (Impact H-3, Class II). Because water would be from an off-site municipal supply, groundwater dewatering would not occur (Impact H-4, No Impact).

Impact H-1: Construction activity could degrade water quality due to erosion and sedimentation (Class II)

During construction activities at the SDCPP, water would be used during grading, dust suppression, and other earth disturbing activities. These activities have the potential to impact groundwater quality if allowed to run off-site. However, water used for grading, dust control, and other activities would be contained on site. Construction-related erosion may impact water quality especially in areas of steep slopes and sandy soils. A construction SWPPP will be required. Mitigation measures similar to SDG&E's APMs include Mitigation Measures H-1c through H-1i below. With Implementation of mitigation measures H-1c, H-1d, H-1e, H-1f, H-1g, H-1h, and H-1i in place, Impact H-1 would be less than significant (Class II).

Mitigation Measures for Impact H-1: Construction activity could degrade water quality due to erosion and sedimentation

H-1a **Prepare Substation Grading and Drainage Plan; construct during the dry season.**

H-1c **Minimize construction and maintenance disturbance to riparian areas.** [WQ-APM-1]

H-1d **Avoid watercourses to the maximum extent possible.** [WQ-APM-2]

H-1e **Identify and mark sensitive areas for avoidance.** [WQ-APM-3]

H-1f **Develop and implement construction Best Management Practices.** [WQ-APM-4]

H-1g **Stream crossings at low flow periods.** [WQ-APM-5]

H-1h **Compliance with NPDES regulations.** [WQ-APM-14]

H-1i **Construction routes to avoid and minimize disturbance to stream channels.** [WQ-APM-15]

Impact H-2: Construction activity could degrade water quality through spills of potentially harmful materials (Class II)

Accidental spills of hazardous materials during construction could degrade quality of surface and/or groundwater. Mitigation similar to SDG&E's APMs for the Proposed Project is required and listed below. With Mitigation Measures H-1c, H-1d, H-1e, H-1f, H-1g, H-1h, H-1i, H-2a, H-2b, and H-2c in place, Impact H-2 would be less than significant (Class II). Related mitigation for hazardous materials spills (Mitigation Measures P-1a and P-1b) is included in Section E.6.10.

Mitigation Measures for Impact H-2: Construction activity could degrade water quality through spills of potentially harmful materials

H-1c **Minimize construction and maintenance disturbance to riparian areas.** [WQ-APM-1]

H-1d **Avoid watercourses to the maximum extent possible.** [WQ-APM-2]

H-1e **Identify and mark sensitive areas for avoidance.** [WQ-APM-3]

H-1f **Develop and implement construction Best Management Practices.** [WQ-APM-4]

H-1g **Stream crossings at low flow periods.** [WQ-APM-5]

H-1h **Compliance with NPDES regulations.** [WQ-APM-14]

H-1i **Construction routes to avoid and minimize disturbance to stream channels.** [WQ-APM-15]

H-2a **Groundwater testing and treatment before disposal.** [WQ-APM-8]

H-2b **No storage of fuels and hazardous materials near sensitive water resources.** [WQ-APM-9]

H-2c **Proper disposal and clean-up of hazardous materials.** [WQ-APM-13]

Impact H-3: Excavation could degrade groundwater quality in areas of shallow groundwater (Class II)

Excavation in areas of shallow groundwater could allow contaminants to enter groundwater. Implementation of mitigation similar to SDG&E APMs for the Proposed Project would be required to reduce excavation impact on groundwater quality to less than significant (Class II).

Mitigation Measure for Impact H-3: Excavation could degrade groundwater quality in areas of shallow groundwater

H-1c **Minimize construction and maintenance disturbance to riparian areas.** [WQ-APM-1]

H-2a **Groundwater testing and treatment before disposal.** [WQ-APM-8]

H-3a **Detect and avoid groundwater with project excavations.** [WQ-APM-11]

Water Resources Operational Impacts for SDCPP

Water resources impacts for SDCPP during operation would be similar to those that would occur for SBRP for soil compaction (Impact H-5), any project feature located in a floodplain or watercourse (Impact H-6, Class II), or accidental releases of contaminants (Impact H-7, Class II). The Padre Dam Sewage Treatment Facility in the City of Santee would provide wastewater service.

Impact H-5: Creation of new impervious areas could cause increased runoff resulting in flooding or increased erosion downstream (Class III)

The new SDCPP and access roads could result in additional runoff through creation of impervious areas and compaction of soils. Impervious areas and compacted soils generally have higher runoff coefficients than natural areas. Whereas the effect may be locally noticeable, overall impact on watershed flows will be negligible due to the relatively small impervious area of the project site. Impact H-5 is considered less than significant (Class III) and no mitigation is required.

Impact H-6: Transmission towers or other aboveground project features located in a floodplain or watercourse could result in flooding, flood diversions, or erosion (Class II)

If power plant or transmission facilities are located in floodplain areas, these features could divert water and create flooding or erosion affecting adjacent properties. This impact would be less than significant (Class II) with Implementation of mitigation measures H-1c and H-6a.

Mitigation Measures for Impact H-6: Transmission towers or other aboveground project features located in a floodplain or watercourse could result in flooding, flood diversions, or erosion

H-1c **Minimize construction and maintenance disturbance to riparian areas.** [WQ-APM-1]

H-6a **Scour protection to include avoidance of bank erosion and effects to adjacent property.**

Impact H-7: Accidental releases of contaminants from project facilities could degrade water quality (Class II)

Operation of power plants can result in accidental spills of contaminants, which can degrade surface or groundwater quality. With Implementation of mitigation measure H-7a, Impact H-7 would be less than significant (Class II).

Mitigation Measure for Impact H-7: Accidental releases of contaminants from project facilities could degrade water quality

H-7a **Develop Hazardous Substance Control and Emergency Response Plan for project operation.**

Impact H-9: Project construction or operation would potentially impact local water supply (Class I)

Process evaporative cooler makeup and potable water for SDCPP would be supplied by the City of San Diego Municipal Water District. Non-potable water would be supplied by the Padre Dam Municipal Water District in the City of Santee. Process water and sanitary wastewater would be disposed of at the Padre Dam Water Recycling Facility. It is expected that the SDCPP will use approximately 115,000 gallons per day of water and discharge approximately 107,000 gallons per day of wastewater. Use of local water supplies for evaporative cooling could adversely affect local water supplies. As a result, increased water use by SDCPP for evaporative cooling would cause a significant and unavoidable impact (Class I).

Water Resources for Peakers

Water Resources Setting for Peakers

Miramar, Pala, and Borrego Springs Substations. These three alternative components are located in San Diego County. The San Diego County Water Authority provides potable water to the County.[45]

Two of the peaker sites are located in a designated groundwater basin. No groundwater basin exists near the Miramar project area. The San Luis Rey Valley Basin underlies the project area at the Pala project site and the Borrego Valley Basin underlies the project area in Borrego Springs.

Margarita Substation. The existing Margarita Substation is located in Orange County. Orange County depends on imported water from Northern California through the State Water Project and the Colorado River for approximately 50 percent of the total supply to Orange County.[46] The other half comes from several sources: a large groundwater basin underlying the northern half of Orange County, recycled wastewater produced by several local water agencies, and several small groundwater basins. South Orange County is virtually 100 percent dependent on imported water. Orange County Water District (OCWD) manages the groundwater basin, while the Municipal Water District of Orange County (MWDOC) manages the imported water supply.[47]

The Margarita Substation is located within the San Juan Creek Watershed and approximately 3,000 feet west of the San Juan Valley Basin. The San Juan Creek Watershed covers 133.9-square-mile and includes portions of the Cities of Dana Point, Laguna Hills, Laguna Niguel, Mission Viejo, Rancho Santa Margarita, and San Juan Capistrano. Its main tributary, San Juan Creek, originates in the Santa Ana Mountains district of the Cleveland National Forest in the easternmost part of Orange County.[48] The Arroyo Trabuco and Oso Creek are smaller tributaries.

Table E.6.12-2 lists surface water resources in the vicinity of the project sites.

Table E.6.12-2. Surface Water Resources – Peakers

Watercourse	Associated Groundwater Basin	FEMA Flood Hazard Area
Miramar II		
Rose Canyon Creek	none	Mapped
Pala		
San Luis Rey River	San Luis Rey Valley Basin	Mapped
Gomez Creek	San Luis Rey Valley Basin	Mapped
Standing water (abandoned quarry)	San Luis Rey Valley Basin	Mapped
Margarita		
Unnamed intermittent stream	none	
Unnamed stream	The Borrego Valley Basin	Mapped

Construction and Operational Impacts

Section D.12.4 includes a discussion of significance criteria for impacts related to water resources.

[45] San Diego County Water Authority, 2007. Information website: www.sdcwa.org. Accessed on May 9.

[46] Orange County, 2007. General Plan Resources Element, located online at: http://www.ocplanning.net/docs/GeneralPlan2005/Chapter_VI_Resources.pdf. Accessed May 9.

[47] Ibid.

[48] Ibid.

Water Resources Construction Impacts for Peakers

Impacts to water resources during construction of the peakers would be similar to those that would occur for SBRP. For any power plant, construction activity could degrade water quality through erosion or spills of potentially harmful materials (Impacts H-1 and H-2, Class II), and excavation could degrade groundwater quality in areas of shallow groundwater (Impact H-3, Class II). Water use during construction would deplete local water supplies (Impact H-4), but the depletion would be less than significant with Implementation of mitigation measures (Class II).

Impact H-1: Construction activity could degrade water quality due to erosion and sedimentation (Class II)

During construction activities, water would be used during grading activities to minimize dust emissions; however, the amount of water used during grading would be minimal as grading activities would be a short-term duration for the peakers. The water used for dust suppression is not expected to infiltrate to groundwater or flow offsite due to the small quantities used, so is not expected to impact groundwater quality. Mitigation measures similar to SDG&E's APMs include Mitigation Measures H-1c through H-1i below. With Implementation of mitigation measures H-1c, H-1d, H-1e, H-1f, H-1g, H-1h, and H-1i in place, Impact H-1 would be less than significant (Class II).

Mitigation Measures for Impact H-1: Construction activity could degrade water quality due to erosion and sedimentation

H-1a **Prepare Substation Grading and Drainage Plan; construct during the dry season.**

H-1c **Minimize construction and maintenance disturbance to riparian areas.** [WQ-APM-1]

H-1d **Avoid watercourses to the maximum extent possible.** [WQ-APM-2]

H-1e **Identify and mark sensitive areas for avoidance.** [WQ-APM-3]

H-1f **Develop and implement construction Best Management Practices.** [WQ-APM-4]

H-1g **Stream crossings at low flow periods.** [WQ-APM-5]

H-1h **Compliance with NPDES regulations.** [WQ-APM-14]

H-1i **Construction routes to avoid and minimize disturbance to stream channels.** [WQ-APM-15]

Impact H-2: Construction activity could degrade water quality through spills of potentially harmful materials (Class II)

Accidental spills of hazardous materials can happen during construction, with a risk of degrading water quality. Mitigation similar to SDG&E's APMs for the Proposed Project is required and listed below. With Mitigation Measures H-1c, H-1d, H-1e, H-1f, H-1g, H-1h, H-1i, H-2a, H-2b, and H-2c in place, Impact H-2 would be less than significant (Class II). Related mitigation for hazardous materials spills (Mitigation Measures P-1a and P-1b) is included in Section E.6.10.

Mitigation Measures for Impact H-2: Construction activity could degrade water quality through spills of potentially harmful materials

H-1c **Minimize construction and maintenance disturbance to riparian areas.** [WQ-APM-1]

H-1d **Avoid watercourses to the maximum extent possible.** [WQ-APM-2]

H-1e **Identify and mark sensitive areas for avoidance.** [WQ-APM-3]

H-1f **Develop and implement construction Best Management Practices.** [WQ-APM-4]

H-1g **Stream crossings at low flow periods.** [WQ-APM-5]

H-1h **Compliance with NPDES regulations.** [WQ-APM-14]

H-1i **Construction routes to avoid and minimize disturbance to stream channels.** [WQ-APM-15]

H-2a **Groundwater testing and treatment before disposal.** [WQ-APM-8]

H-2b **No storage of fuels and hazardous materials near sensitive water resources.** [WQ-APM-9]

H-2c **Proper disposal and clean-up of hazardous materials.** [WQ-APM-13]

Impact H-3: Excavation could degrade groundwater quality in areas of shallow groundwater (Class II)

Excavation during project construction could allow contaminants to enter groundwater. Implementation of mitigation similar to SDG&E APMs for the Proposed Project, listed below, would be required to reduce excavation impact on groundwater quality to less than significant (Class II).

Mitigation Measure for Impact H-3: Excavation could degrade groundwater quality in areas of shallow groundwater

H-1c **Minimize construction and maintenance disturbance to riparian areas.** [WQ-APM-1]

H-2a **Groundwater testing and treatment before disposal.** [WQ-APM-8]

H-3a **Detect and avoid groundwater with project excavations.** [WQ-APM-11]

Impact H-4: Groundwater dewatering for project construction could deplete local water supplies (Class II)

Water use for construction of the peakers could result in a local and temporary drawdown of local groundwater levels and temporarily reduce the yield of nearby water supply wells. Water used for dust control during construction of the peakers would be supplied through existing water sources available to the selected contractors. Although the exact amount of water required during construction and the exact source of water is not known, this temporary water use would not be expected to significantly impact local water supplies. Mitigation measure H-4a requiring implementation of the requirements of SDG&E's APM-11 regarding identification of wells and provision of alternate water supplies during the period of depletion would ensure impacts will be less than significant (Class II).

Mitigation Measure for Impact H-4: Groundwater dewatering for project construction could deplete local water supplies

H-4a **Avoid using source water and provide alternative sources where avoidance is not possible.** Section D.12.11 includes a description of this mitigation measure.

H-3a **Detect and avoid groundwater with project excavations.** [WQ-APM-11]

Water Resources Operational Impacts for Peakers

Because hazardous materials would be used at power plants, their operation would cause accidental releases of contaminants (Impact H-7), but mitigation measures would reduce this impact to less than significant (Class II). The project sites are located at least 500 feet away from any floodplain or watercourse (Impact H-6, No Impact). The peaking power plants under the New In-Area All-Source Generation Alternative would not involve notable linear facilities that could be subject to damage from stream scour. As a result, impacts of linear facilities crossing stream channels (Impact H-8) would not occur (No Impact). Utility hookups to peaker power plants at existing substations (water, sewer, natural gas) would occur within existing city streets or SDG&E ROW and would not substantially impact existing drainage patterns, surface runoff, or stormwater drainage systems. Once installed, underground utility line areas would be restored with no change to existing drainage patterns.

Impact H-5: Creation of new impervious areas could cause increased runoff resulting in flooding or increased erosion downstream (Class III)

Existing site topography of the substations used for peakers would be maintained to the extent possible so that stormwater runoff would flow through the existing drainage patterns except around equipment, where it would be collected in a retention basin. Stormwater would be allowed to infiltrate or evaporate. The amount of additional runoff due to creation of impervious areas and compaction of soils would be local and minor. Like SDCPP, the new power plants and access roads could result in additional runoff through creation of impervious areas and compaction of soils. Whereas the effect would be locally noticeable, overall impact on watershed flows will be negligible due to the relatively small impervious area of the project site. Impact H-5 is considered less than significant (Class III) and no mitigation is required.

Impact H-7: Accidental releases of contaminants from project facilities could degrade water quality (Class II)

Project operation could result in accidental release of contaminants, degrading quality of surface or groundwater. With Implementation of mitigation measure H-7a, Impact H-7 would be less than significant (Class II).

Mitigation Measure for Impact H-7: Accidental releases of contaminants from project facilities could degrade water quality

H-7a Develop Hazardous Substance Control and Emergency Response Plan for project operation.

Impact H-9: Project construction or operation would potentially impact local water supply (Class III)

Any permanent use of water as a result of peaker generator operations would not be expected to significantly impact local water supplies. Peaker power plants would not be expected to include evaporative cooling systems. Water providers in the areas of the substation sites have long-term water sources and a permanent supply to the area. The water demand for the peakers would be minor and would not substantially affect local water supplies (Class III).

Overall Water Resources Impacts of the New In-Area All-Source Generation Alternative

Conventional Generation

For any power plant development under the New In-Area All-Source Generation Alternative, the water resources impacts during construction, degradation of water quality due to erosion, sedimentation, or spills of potentially harmful materials, degradation of groundwater quality, and depletion of local water supplies (Impact H-1 through H-4), would either be less than significant or subject to Implementation of mitigation measures similar to those required for the Proposed Project (Class II or Class III). With Mitigation Measure H-1a, degradation of water quality due to erosion and sedimentation (Impact H-1) would be reduced to less than significant levels (Class II).

Power plant development would result in increased runoff at new power plant sites (Impact H-5). This increase is expected to be minor and local (Class III).

Normal operations of the power plants under the New In-Area All-Source Generation Alternative would involve increased impacts to local water supplies due to cooling water use (Impact H-9). Increased water use by power plants using evaporative cooling would be a significant and unavoidable impact to local water supplies (Class I).

Renewable Generation

For overall impacts of the New In-Area Renewable Generation, please see Section E.5 (Solar Photovoltaics, Biomass/Biogas and Wind components).

E.6.13 Geology, Mineral Resources, and Soils

Geology, Mineral Resources, and Soils Regulatory Setting for Conventional Power Plants

The New In-Area All-Source Generation Alternative would be located in a seismically active region. New structures including electrical generating facilities must be designed to comply with the California Building Code (CBC) and Uniform Building Code (UBC) requirements. The CBC and UBC are considered to be a standard safeguards against major structural failures and loss of life. The goals of the codes are to provide structures that will: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage but with some nonstructural damage; and (3) resist major earthquakes without collapse but with some structural and non-structural damage. The UBC bases seismic design on minimum lateral seismic forces (ground shaking). The UBC requirements operate on the principle that providing appropriate foundations, among other aspects, helps to protect buildings from failure during earthquakes. All new structures related to the New In-Area All-Source Generation Alternative would meet the latest UBC codes.

Geology, Mineral Resources, and Soils for SBRP

Geology, Mineral Resources, and Soils Setting for SBRP

The SBRP site and linear facilities are located in an area of fairly flat topography (elevation approximately 10 to 25 feet above mean sea level) on the southeastern part of San Diego Bay. The project site is on a coastal plain on the edge of the Peninsular Ranges physiographic province of Southern California. The coastal plain is underlain by artificial fill, Holocene alluvium, and Pleistocene terrace and marine deposits (Black & Veatch, 2005, Woodward-Clyde Consultants, 1992). Artificial fill has occurred in the vicinity of the site since prior to the 1950s to raise the grade. Recent sediments are characteristic of deltaic and shallow bay depositional environments. Older Holocene alluvial sediments originated from Telegraph Creek and other drainages that emptied into the bay. (Woodward-Clyde Consultants, 1992). The geologic structure of southern California is dominated by right-lateral strike-slip faulting with the movement of two tectonic plates. The San Andreas fault system marks the principal boundary between the Pacific plate and the North American plate. Much of the San Diego coastal area is a graben lying within the Rose Canyon fault zone, a series of right-lateral faults encompassing the project site.

Two major zones of seismic activity are located within 20 miles of the SBRP site, the Rose Canyon and Coronado Bank fault zones. The Rose Canyon Fault is located approximately 0.6 miles west of the SBRP site. This fault zone is considered to represent a significant seismic hazard to the metropolitan San Diego area. Located approximately 12.8 miles west of the SBRP site lies the Coronado Bank Fault Zone. No known faults exist at the SBRP site.

Previous geotechnical investigations have been conducted for the SBRP site by Black & Veatch (2005, 2006). The scope of the investigations was to assess soil conditions, depth to groundwater, and anticipated foundation loads. Ground rupture, seismic shaking, liquefaction, subsidence, expansive soils and tsunami/seiche are all potential geologic hazards that might occur in the SBRP area, based on the geotechnical investigation performed by Black & Veatch (2005, 2006).

The likelihood that liquefaction would occur is considered moderate to high. (Black & Veatch, 2005; 2006, Woodward-Clyde Consultants, 1992). The City of Chula Vista General Plan Update identifies the

site area as a liquefaction hazard area (City of Chula Vista, 2005), and the 1992 geotechnical investigation identified that some highly expansive soils were present (Woodward-Clyde Consultants, 1992).

Due to the lack of study of offshore fault zones, the potential for tsunamis is not fully known (Black & Veatch, 2006). The full impact of tsunamis is difficult to quantify, given the lack of study data, but the SBRP site is located inside of the area of potential tsunami inundation identified in the San Diego County Multi-Hazard Mitigation Plan.

No oil or gas fields are present in the immediate SBRP vicinity, according to on-line maps from the State of California Division of Oil, Gas and Geothermal Resources (CDOGGR, 2005). There are no known geologic resources that provide a significant scientific or recreational value in the vicinity of the SBRP site.

The applicable regulations, plans and standards for the New In-Area All-Source Generation are the same as for the Proposed Project and can be found in Section D.13.3. The significance criteria for the New In-Area All-Source Generation would be the same as for the Proposed Project and can be found in Section D.13.4.

Geology, Mineral Resources, and Soils Construction Impacts for SBRP

Impact G-1: Erosion would be triggered or accelerated due to construction activities (Class II)

Erosion of the soils at SBRP site would be triggered or accelerated during construction activities for the power plant or the substation site. Available mitigation measures would include G-1a (Limit modification of access roads,) G-1c (Avoid new disturbance, erosion, and degradation,) and G-1d (Restore surfaces for erosion control and vegetation.) In addition, a Stormwater Pollution Prevention Plan (SWPPP) that would limit erosion from the construction site would be required in accordance with the Clean Water Act. With these procedures in place, the potential for erosion to be triggered by construction activities at SBRP would be less than significant levels (Class II). The full text of the mitigation measures appears in appendix 12.

Mitigation Measures for Impact G-1: Erosion could be triggered or accelerated due to construction activities (Class III)

G-1a **Limit modification of access roads.** [GEO-APM-1]

G-1b **Implement erosion control procedures**.[GEO-APM-2]

G-1d **Restore surfaces for erosion control and revegetation.** [GEO-APM-6]

Geology, Mineral Resources, and Soils Operational Impacts for SBRP

Impacts related to unique geological features (Impact G-2) would not occur at this site as it would be located adjacent to an existing power plant with no unique geological features. Impacts related to surface fault rupture (Impact G-5) and slope instability (Impacts G-4 and G-6) would not occur at this site due to the lack of active faults at or in the vicinity of the SBRP site and the relatively flat to gently sloping terrain.

Impact G-3: Project would expose people or structures to potential substantial adverse effects as a result of problematic soils (Class II)

Problematic soil types at the SBRP would include those that are conducive to liquefaction, expansive soils, and soils that have a potential to corrode steel and concrete. The potential for project structures to be damaged by problematic soils would be an adverse affect. Available mitigation measures would include G-3a (Application of standard design and construction practices,) and G-3b (Reducing the adverse affects of problematic soils by avoiding placement of structures in areas of high shrink/swell potential). This mitigation would reduce this impact to a less than significant level (Class II).

Mitigation Measures for Impact G-3: Project would expose people or structures to potential substantial adverse effects as a result of problematic soils

G-3a **Conduct geotechnical studies for soils to assess characteristics and aid in appropriate foundation design.**

G-3b **Avoid structure placement in high shrink/swell areas.** [GEO-APM-3]

Impact G-4: Project would expose people or structures to potential substantial adverse effects as a result of seismically induced groundshaking and/or ground failure (Class II)

Ground shaking presents a significant geologic hazard to the SBRP site, the relocated substation, and linear facilities. Ground shaking also presents a geologic hazard to the existing SBPP site. The linear facilities associated with the SBRP site (natural gas line, potable water line, transmission lines, and recycled water line) would potentially be damaged by seismically induced ground-shaking. This hazard would potentially also cause pipeline rupture. Strong groundshaking would also potentially result in seismically induced ground failures, including liquefaction and slope failures. Therefore there would be a significant impact. The following mitigation measures would be implemented to reduce the impact to less than significant, mitigation measures G-5a which would require avoidance of fault lines where feasible, G-5b which would require placement of structures in geologically stable areas, G-3a (Reduce effects of groundshaking,), and G-3b (Conduct geotechnical investigations for liquefaction). With these measures, the potential for project structures to be damaged by seismically induced groundshaking and/or ground failure would be less than significant (Class II).

Mitigation Measures for Impact G-4: Project would expose people or structures to potential substantial adverse effects as a result of seismically induced groundshaking and/or ground failure

G-4a **Reduce effects of groundshaking.**

G-4b **Conduct geotechnical investigations for liquefaction.**

G-5a **Minimize project structures within active fault zones.**

G-5b **Place structures in geologically stable areas.**

Impact G-7: Project would expose people or structures to potential substantial adverse effects as a result of landslides, earthflows, debris flows, and/or rockfall (Class II)

Slope instability including landslides, earth flows, debris flows, and rock fall has the potential to undermine foundations or linear facilities. The potential for project structures to be damaged by landslides, earthflows, debris flows, and/or rock fall would be very low for the SBRP site and linear facilities. Available mitigation would include G-6a which would require that project structures are located outside of areas with unstable slopes and that boulders are removed from slopes or stabilized. As a result, the impact would be less than significant (Class II).

Mitigation Measure for Impact G-7: Project would expose people or structures to potential substantial adverse effects as a result of landslides, earthflows, debris flows, and/or rockfall

G-6a Conduct geotechnical surveys for landslides and protect against slope instability.

Geology, Mineral Resources, and Soils for SDCPP

Geology, Mineral Resources, and Soils Setting for SDCPP

The SDCPP is located within the Peninsular Range region in an area of dissected hilly terrain. The SDCPP is on the western slopes of Sycamore Canyon and includes moderately sloping elongated north-south ridges and valleys. The Site is primarily underlain by non-marine sedimentary units of the Poway Group (Ec), the Stadium and Pomerado Conglomerates. The conglomerates overlie fine-grained marine deposits of the Friars Formation. There are no significant active faults in the in the vicinity of the SDCPP and there is only a potential for minor earthquake induced groundshaking, with estimated PGAs of 0.2 to 0.3g. The closest active fault to the SDCPP is the Rose Canyon Fault Zone and the next closest active fault is the Elsinore Fault Zone, located approximately 14 miles to the west and 29 miles to the east, respectively. The SDCPP site is underlain by two soil associations, the Urban Land–Redding-Olivenhain (s998) and Ramona-Placentia-Linne-Greenfield (s999) associations, which have very similar characteristics (see Table D.13-2). There are no mapped mines or known mineral resource sites at or adjacent to the SDCPP site. Geology, Mineral Resources, and Soils Construction Impacts for SDCPP

Construction and Operational Impacts

Section D.13.4 includes a discussion of significance criteria for impacts related to geology, mineral resources, and soils.

Geology, Mineral Resources, and Soils Construction Impacts for SDCPP

Impact G-2 (Unique geologic features would be damaged due to construction activities) would not occur as there would be no unique geologic features at the SDCPP site.

Impact G-1: Erosion would be triggered or accelerated due to construction activities (Class II)

Soils at the SDCPP site, s998 and s999, have a potential hazard of erosion ranging from slight to very severe. SDCPP construction activities, including site and access road grading, would potentially trigger or accelerate erosion. Therefore there is a significant impact. Mitigation measures would be required to limit grading of existing roads in areas with sensitive soils (Mitigation Measure G-1a). Other mitigation recommended includes use of erosion control procedures such as sand bags and road bars, to control water erosion and limiting construction traffic to minimize erosion (Mitigation Measure G-1b). In addition, a Stormwater Pollution Prevention Plan (SWPPP) that would limit erosion from the construction site would be required in accordance with the Clean Water Act. The implementation of these measures would reduce the potentially significant impact to less than significant levels (Class II).

Mitigation Measure for Impact G-1: Erosion would be triggered or accelerated due to construction activities

G-1a Limit modification of access roads. [GEO-APM-1]

G-1b Implement erosion control procedures.[GEO-APM-2]

Impact G-6: Project would expose people or structures to potential substantial adverse effects as a result of slope instability created during excavation and/or grading (Class II)

Construction consisting of grading and excavation along and adjacent to slopes underlain by the landslide-prone Poway Group units and Friars Formation would potentially cause slope instability. No unstable earth conditions or changes in geologic substructures are expected to result from the SDCPP. However, landslides along the moderately sloping hills are possible at the site, and construction of the SDCPP could be impacted by slope stability issues to varying degrees around the site. Therefore there would be a significant impact. Implementing Mitigation Measure G-6a (Conduct geotechnical surveys for landslides and protect against slope instability) would reduce this impact to a less than significant level (Class II).

Mitigation Measure for Impact G-6: Project would expose people or structures to potential substantial adverse effects as a result of slope instability created during excavation and/or grading

G-6a Conduct geotechnical surveys for landslides and protect against slope instability.

Geology, Mineral Resources, and Soils Operational Impacts for SDCPP

Impacts related to surface fault rupture (Impact G-5) would not occur at this site due to the lack of active faults at or in the vicinity of the SDCPP site (No Impact).

Impact G-3: Project would expose people or structures to potential substantial adverse effects as a result of problematic soils (Class II)

Problematic soil types at the SDCPP would include expansive soils and soils that have a potential to corrode steel and concrete. The potential for project structures to be damaged by problematic soils would be an adverse affect. Available mitigation would include SDG&E's APMs for the Proposed Project, which would require application of standard design and construction practices, and reduction of the adverse affects of problematic soils by avoiding placement of structures in areas of high shrink/swell potential, to the extent feasible. Additionally, the alternative would apply standard design and construction practices and Implementation of mitigation measure G-3b (Avoid structure placement in high shrink/swell areas). Mitigation measures similar to SDG&E's GEO APM 3 (see Table D.13-11) would partially reduce the adverse affects of problematic soils by avoiding placement of structures in areas of high shrink/swell potential, to the extent feasible. Implementation of Mitigation Measure G-3a (Conduct geotechnical studies for soils to assess characteristics and aid in appropriate foundation design) would also be required to delineate locations of high shrink/swell (expansive) soils and the presence, absence, and location of corrosive soils to fully reduce this impact to a less than significant level (Class II).

Mitigation Measure for Impact G-3: Project would expose people or structures to potential substantial adverse effects as a result of problematic soils

G-3a Conduct geotechnical studies for soils to assess characteristics and aid in appropriate foundation design.

G-3b Avoid structure placement in high shrink/swell areas. [GEO-APM-3]

Impact G-4: Project would expose people or structures to potential substantial adverse effects as a result of seismically induced groundshaking and/or ground failure (Class II and III)

Minor groundshaking is expected at the SDCPP site and along the transmission line to Sycamore Substation in the event of an earthquake on the faults in the region, with estimated PGAs ranging from 0.2 to 0.3 g. The Applicant would follow all applicable building codes and standard practices for power

plant design and construction, including the Title 20 of the California Code of Regulations and the 2001 California Building Code. As a result, potential impacts would be less than significant (Class III). Additionally, appropriate tower design accounting for lateral wind loads and conductor loads would likely exceed any creditable seismic loading minimizing potential damage to tower structures from groundshaking, reducing these impacts to less than significant (Class III).

Minor groundshaking would potentially result in seismically induced slope failures such landslides along portions of the transmission ROW and at the SDCPP site that are along and adjacent to slopes underlain by the landslide-prone Poway Group units. Slope failures could result in damage to tower structures or power plant facilities, a significant impact. Liquefaction is not likely due to the nature of the underlying bedrock units. Implementation of mitigation measures G-4b (Conduct geotechnical investigations for liquefaction) and Mitigation Measure G-6a (Conduct geotechnical surveys for landslides and protect against slope instability)would reduce the potential for project structures to be damaged by seismically induced groundshaking and/or ground failure to be less than significant (Class II).

Mitigation Measure for Impact G-4: Project would expose people or structures to potential substantial adverse effects as a result of seismically induced groundshaking and/or ground failure

G-4b Conduct geotechnical investigations for liquefaction.

G-6a Conduct geotechnical surveys for landslides and protect against slope instability.

Impact G-7: Project would expose people or structures to potential substantial adverse effects as a result of landslides, earthflows, debris flows, and/or rockfall (Class II)

Slope instability including landslides, earth flows, debris flows, and rock fall has the potential to undermine foundations or linear facilities. There is a notable potential for project structures to be damaged by landslides in the areas of hilly terrain of the SDCPP and linear facilities where it is underlain by landslide-prone units of the Poway Group. This would be a significant impact. Mitigation measures G-5a (Minimize project structures within active fault zones) and G-6a (Conduct geotechnical surveys for landslides and protect against slope instability) would be required to reduce the impact to be less than significant (Class II).

Mitigation Measure for Impact G-7: Project would expose people or structures to potential substantial adverse effects as a result of landslides, earthflows, debris flows, and/or rockfall

G-5a Minimize project structures within active fault zones.

G-6a Conduct geotechnical surveys for landslides and protect against slope instability.

Geology, Mineral Resources, and Soils for Peakers

Geology, Mineral Resources, and Soils Setting for Peakers

Miramar Energy Facility. The Miramar Energy Facility is located within the Coastal Plain region of San Diego County.[49] The Coastal Plain region of San Diego consists of a sequence of Tertiary to late Cretaceous marine and non-marine sedimentary rock units forming mesa and terraces primarily overlying Mesozoic granitic rocks. The terraces and mesas along the Coastal Plain were formed by fluctua-

[49] San Diego County, 2007. General Plan Conservation Element, located online at: http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/planning/GP2020/pubs/elements/conservation.pdf. Accessed May 9.

tions in relative elevations of the land and sea (uplift and sea level changes). Resistant peaks of the underlying crystalline rocks (such as Rock Mountain, Black Mountain, and Cowles Mountain) poke through the younger sedimentary units. The Coastal Plain area has been broken up into a number of distinct fault blocks in the southwestern part of the county by seismic events related to the local La Nacion and Rose Canyon fault zones. North of the La Jolla area the effects of faulting are not as great and the rock units are relatively unreformed (Deméré, 2006). The Miramar Energy Facility site is primarily underlain by the Pleistocene Linda Vista Formation (Ql), which is primarily composed of sandstone and conglomerate. The site is relatively flat; however, it is located adjacent to the moderate to steep slopes of tributaries of Rose Canyon.

No active faults are located in the immediate vicinity of the Miramar Energy Facility; however, the active Rose Canyon Fault Zone is located approximately 7.5 miles to the west. The site is located in an area of anticipated minor groundshaking with estimated PGAs ranging from 0.2 to 0.3g.

According to the San Diego County General Plan Conservation Element, the Miramar Energy Facility is not located within any California Department of Conservation (DOC) designated Scientific Resources Zone (SRZ) or a Mineral Resource Zone (MRZ).[50]

Pala Substation. The Pala Substation is located within the Peninsular Range region, which is primarily underlain by igneous rocks (primarily granitic) and metasedimentary rocks that were formed by alteration of the overlying sedimentary rocks during the intrusion of the igneous plutons. The Metasedimentary rocks consist of units such as marbles, slates, schist, quartzite, and gneiss. The Pala Substation and proposed peaker site is underlain by Mesozoic gabbro.

Seismicity of the Pala area is dominated by the Elsinore Fault Zone, which is located approximately 5 miles east of Pala Substation. The site may experience strong to severe groundshaking with estimated PGAs ranging from 0.4 to 0.7g.

According to the San Diego County General Plan Conservation Element, the Pala Substation is not located within any DOC designated SRZ or MRZ.[51] However, the adjacent San Luis Rey River is a source of sand and gravel resources and sand and gravel quarries are located along the river near to the substation site.

Margarita Substation. The Margarita Substation is located in southern Orange County in the western foothills of the Santa Ana Mountains. The western foothills of the Santa Ana Mountains are underlain by Tertiary marine and nonmarine sedimentary units. The substation site is underlain by Miocene Monterey Formation which consists of shale, siltstone and local sandstone beds. The Monterey Formation is known to be very landslide-prone. The site is gently to moderately steeply sloping generally to the east towards a small tributary/side drainage for San Juan Creek.

Seismicity of the southern Orange County area is dominated by the active Elsinore and Newport-Inglewood fault zones. The Elsinore fault zone trends northwest-southeast along the eastern side of the Santa Ana Mountains and is located approximately 17 miles east of the substation site. The Newport-Inglewood fault zone is located just off-shore of the southern Orange County coastline, approximately 12 miles west of the substation. A significant earthquake on either fault, or other significant regional

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[50] San Diego County, 2007. General Plan Conservation Element, located online at: http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/planning/GP2020/pubs/elements/conservation.pdf. Accessed May 9.

[51] Ibid.

active faults, would potentially cause moderate to strong ground shaking in the area, depending on the underlying geologic units. Areas underlain by Tertiary bedrock units, such as the Monterey Formation, would likely only experience moderate groundshaking, with estimated PGAs of 0.3 to 0.4g.

In 1994, the California Department of Conservation, Division of Mines and Geology, published an updated report identifying significant sand and gravel resources for the Orange County region. These resource areas are located in portions of the Santa Ana River, Santiago Creek, San Juan Creek, Arroyo Trabuco and other areas.[52] According to the Orange County General Plan Conservation Element, the Margarita Substation is not located within any DOC designated SRZ or MRZ.[53]

Borrego Springs Substation. The Borrego Springs Substation is located in the Borrego Valley. The Borrego Valley is a north-south trending valley in the Santa Rosa Mountains (on the eastern edge of the Peninsular Range province) that is bounded on the east by the Coyote Creek segment of the San Jacinto Fault Zone. The Borrego Valley is filled by Quaternary alluvial deposits derived from the surrounding mountains. The Borrego Valley Substation site is located in the north central portion of the valley on relatively flat desert terrain.

The Borrego Springs Substation is located in a seismically active area of southern California, located between the Elsinore and San Jacinto Fault Zones. The site is approximately 18 miles east of the Julian Segment of the Elsinore fault and only about 2.5 miles west of the Coyote Creek Segment of the San Jacinto fault. As a result strong to severe groundshaking may be expected at the site in the event of a large earthquake, with estimated PGAs ranging from 0.7 to 0.8g.

According to the San Diego County General Plan Conservation Element, the Borrego Springs Substation is not located within any DOC designated SRZ or MRZ.[54]

Construction and Operational Impacts

Section D.13.4 includes a discussion of significance criteria for impacts related to geology, mineral resources, and soils.

Geology, Mineral Resources, and Soils Construction Impacts for Peakers

Impact G-2 (Unique geologic features would be damaged due to construction activities) would not occur as there would be no unique geologic features at the peaker sites.

Impact G-1: Erosion would be triggered or accelerated due to construction activities (Class II)

During construction of peakers, the possibility exists for temporary erosion resulting from excavating and grading activities. Developers of peaker power plants would be required to develop a construction SWPPP to minimize soil erosion, especially during storm events. Dust control activities associated with construction of the peaker generators would be implemented to reduce the potential for soil erosion and

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[52] Orange County, 2007. Orange County General Plan Resources Element located online at: http://www.ocplanning.net/docs/GeneralPlan2005/Chapter_VI_Resources.pdf. Accessed on May 8.

[53] Ibid.

[54] San Diego County, 2007. General Plan Conservation Element, located online at: http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/planning/GP2020/pubs/elements/conservation.pdf. Accessed May 9.

windblown dust over the property boundary. Still, erosion would potentially be a significant impact. Mitigation measures would be also required to limit grading of existing roads in areas with sensitive soils (Mitigation Measure G-1a). Other mitigation recommended measures include use of erosion control procedures such as sand bags and road bars, to control water erosion and limiting construction traffic to minimize erosion (Mitigation Measure G-1b). In addition, a Stormwater Pollution Prevention Plan (SWPPP) that would limit erosion from the construction site would be required in accordance with the Clean Water Act. With these mitigation measures in place, erosion that would be triggered by construction activities at the peaker sites would be less than significant (Class II).

Because of the desert setting and presence of soil association s994, there is a potential that desert pavement exists at the site and construction activities could damage this unique geologic feature that protects the underlying soils from erosion. Damage to desert pavement could result in extreme acceleration of erosion, but Mitigation Measure G-1a (Limit modification of access roads) would reduce impacts at the alternative peaker at the Borrego Springs Substation to less than significant levels (Class II).

Mitigation Measure for Impact G-1: Erosion would be triggered or accelerated due to construction activities

G-1a **Limit modification of access roads.** [GEO-APM-1]

G-1b **Implement erosion control procedures.** [GEO-APM-2]

Impact G-6: Project would expose people or structures to potential substantial adverse effects as a result of slope instability created during excavation and/or grading (Class II)

Grading and excavation for facility foundations and work areas would occur at the peaker sites and the proposed Miramar and Margarita peaker sites are located on or adjacent to areas with potentially unstable slopes. Implementing Mitigation Measure G-6a (Conduct geotechnical surveys for landslides and protect against slope instability) would reduce this impact to a less than significant level.

Mitigation Measure for Impact G-6: Project would expose people or structures to potential substantial adverse effects as a result of slope instability created during excavation and/or grading

G-6a **Conduct geotechnical surveys for landslides and protect against slope instability.**

Geology, Mineral Resources, and Soils Operational Impacts for Peakers

Impacts related to surface fault rupture (Impact G-5) would not occur at two of the peaker sites due to the lack of active faults at or in the vicinity, but two peaker sites would require mitigation to reduce impacts to less than significant (Class II, No Impact).

Impact G-3: Project would expose people or structures to potential substantial adverse effects as a result of problematic soils (Class II)

Problematic soil types at the peaker sites would include expansive soils and soils that have a potential to corrode steel and concrete. The potential for project structures to be damaged by problematic soils would be an adverse affect. Application of standard design and construction practices and Implementation of mitigation measure G-3b (Avoid structure placement in high shrink/swell areas) Mitigation measures similar to SDG&E's GEO APM 3 (see Table D.13-11) would partially reduce the adverse affects of problematic soils by avoiding placement of structures in areas of high shrink/swell potential, to the

extent feasible. Implementation of measures such as Mitigation Measure G-3a (Conduct geotechnical studies for soils to assess characteristics and aid in appropriate foundation design) would be required to delineate locations of high shrink/swell (expansive) soils and the presence, absence, and location of corrosive soils to fully reduce this impact to a less than significant level (Class II).

Mitigation Measure for Impact G-3: Project would expose people or structures to potential substantial adverse effects as a result of problematic soils

G-3a **Conduct geotechnical studies for soils to assess characteristics and aid in appropriate foundation design.**

G-3b **Avoid structure placement in high shrink/swell areas.** [GEO-APM-3]

Impact G-4: Project would expose people or structures to potential substantial adverse effects as a result of seismically induced groundshaking and/or ground failure (Class II and III)

Minor to moderate groundshaking is expected at the Miramar and Margarita peaker sites in the event of an earthquake on the faults in the region, with estimated PGAs ranging from 0.2 to 0.3 g. The Applicant would follow all applicable building codes and standard practices for power plant design and construction, including the Title 20 of the California Code of Regulations and the 2001 California Building Code. As a result, potential impacts would be less than significant (Class III) because building codes consider seismic risk in their requirements.

Strong to severe groundshaking is anticipated at the Pala and Borrego Springs peaker sites from a large local earthquake, with estimated PGAs ranging from 0.4 to 0.8g. The Applicant would follow all applicable building codes and standard practices for power plant design and construction, including the Title 20 of the California Code of Regulations and the 2001 California Building Code. These criteria in addition to applicable mitigation such Mitigation Measure G-3a (Reduce effects of groundshaking) for the Proposed Project should be implemented to ensure that project structures are not damaged by strong groundshaking, reducing impacts to less than significant (Class II).

Groundshaking would potentially result in seismically induced slope failures such landslides along portions of the Miramar and Margarita sites that are along and adjacent to moderately steep slopes. Slope failures would potentially result in damage to project facilities. Therefore there is a significant impact. Liquefaction is not likely at any of the sites due to the nature of the underlying bedrock units and/or to the lack of shallow groundwater. Implementation of mitigation measures G-4b (Conduct geotechnical investigations for liquefaction) and Mitigation Measure G-6a (Conduct geotechnical surveys for landslides and protect against slope instability) would reduce this impact to be less than significant (Class II).

Mitigation Measure for Impact G-4: Project would expose people or structures to potential substantial adverse effects as a result of seismically induced groundshaking and/or ground failure

G-4b **Conduct geotechnical investigations for liquefaction.**

G-6a **Conduct geotechnical surveys for landslides and protect against slope instability.**

Impact G-7: Project would expose people or structures to potential substantial adverse effects as a result of landslides, earthflows, debris flows, and/or rockfall (Class II)

Peaker project sites (Miramar and Margarita) would be adversely affected by slope instability (landslides, earth flows, and debris flows). Mitigation measures G-5a (Minimize project structures within active fault zones) and G-6a (Conduct geotechnical surveys for landslides and protect against slope instability) would be required to reduce the impact to be less than significant (Class II).

Mitigation Measure for Impact G-7 Project would expose people or structures to potential substantial adverse effects as a result of landslides, earthflows, debris flows, and/or rockfall

G-5a Minimize project structures within active fault zones.

G-6a Conduct geotechnical surveys for landslides and protect against slope instability.

Overall Geology, Mineral Resources, and Soils Impacts of the New In-Area All-Source Generation Alternative

Conventional Generation

For any power plant development under the New In-Area All-Source Generation Alternative, the impacts related to geology, mineral resources, and soil erosion during construction (Impact G-1 and Impact G-5) would either be less than significant or less than significant subject to Implementation of mitigation measures similar to those required for the Proposed Project (Class II or Class III).

Normal operations of the power plants under the New In-Area All-Source Generation Alternative would involve increased exposure of electrical generating facilities to the hazards of problematic soils (Impact G-2), seismically induced groundshaking and ground failures (Impact G-3), and other hazards of unstable slopes (Impact G-6). With mitigation, these impacts would be less than significant (Class II or Class III).

Power plant and peaker project sites could be affected by slope instability (landslides, earth flows, and debris flows). Mitigation Measures G-5a (Minimize project structures within active fault zones) and G-6a (Conduct geotechnical surveys for landslides and protect against slope instability) would be required to reduce the impact to be less than significant (Class II).

Renewable Generation

For overall impacts of the New In-Area Renewable Generation, please see Section E.5 (Solar Photovoltaics, Biomass/Biogas and Wind components).

E.6.14 Socioeconomics, Public Services, and Utilities

The significance criteria used in this analysis are the same as those used for the Proposed Project and are set forth in Section D.14.4.

Socioeconomics, Public Services, and Utilities for SBRP

Chula Vista General Plan. The City of Chula Vista General Plan (City of Chula Vista, 2005) describes goals for economic diversification and development through its General Plan themes.

Chula Vista Redevelopment Agency. The Chula Vista Redevelopment Agency has established five redevelopment project areas within the city. In 2005, they were all merged into what is called the Merged Chula Vista Redevelopment Project Area. SBRP is located within the area covered by the Redevelopment Plan known as the Southeast Redevelopment Area.

Socioeconomics, Public Services, and Utilities Setting for SBRP

The City of Chula Vista, with an estimated January 1, 2006 population of 223,423 is the second largest city in San Diego County, after San Diego. Of the overall total population within a 6-mile radius, approximately 76 percent are racial minority, 53 percent are of Hispanic origin,[55] and 15 percent are low-income. This compares to 45 percent racial minority, 50 percent Hispanic, and 11 percent low-income for the City of Chula Vista. San Diego County's population is 34 percent minority, 27 percent Hispanic, and 12 percent low-income.

The Port of San Diego relies on the local municipalities' fire department, and as the SBRP site is within the City of Chula Vista, the City's Fire Department (CVFD) would have jurisdiction. The SBRP site is between two stations (Station No. 1 and Station No. 5) and, as such, can be served by either of these two stations. CVFD firefighters would be the first responders to any emergencies involving hazardous materials (hazmat). CVFD has a contract with the San Diego County Department of Environmental Health Hazardous Materials Division (HMD) for additional hazmat support (Geering, 2006). Emergency response activities include mitigation, containment and control actions as well as hazard identification, evaluating the threat to the local populations and the environment. Thus, the Department of Environmental Health is capable of handling any emergency involving spills, e.g., anhydrous ammonia

Socioeconomics, Public Services, and Utilities Impacts for SBRP

Impact S-1: Project construction and/or transmission line presence would cause a substantial change in revenue for businesses, tribes, or governments (Class III)

Construction of SBRP would involve boilermakers, carpenters, electricians, ironworkers, laborers, millwrights, operators, and pipefitters. Total personnel requirements during construction of the SBRP would be approximately 5,406 person-months, or 451 person-years. Construction personnel requirements would peak at approximately 400 workers. Available skilled labor in the San Diego County identified by the Building and Trades Council and CEDD indicates that the SBRP peak construction needs would be less than 0.5 percent of the total workforce.

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[55] Hispanics or Latinos are those people who classified themselves in one of the specific Spanish, Hispanic, or Latino categories listed on the Census 2000 questionnaire—"Mexican, Mexican Am., Chicano," "Puerto Rican," or "Cuban" — as well as those who indicate that they are "other Spanish/Hispanic/Latino." People who identify their origin as "other Spanish/Hispanic/Latino" may be of any race. Thus, the percent Hispanic should not be added to percentages for racial (i.e., minority) categories.

Most of the construction workforce would be drawn from San Diego County with others from Southern California or from out of state. Since most workers are expected to commute to the project site, they will not contribute to an increase in the population of the area. In addition to the available hotel/motel accommodation, there are about 40 recreational vehicle (RV) parks within 2.5 miles of the City of Chula Vista. As a result, construction of the Proposed Project would not increase the demand for housing.

SBRP initial capital cost is estimated to be $441 million; of this, materials and supplies are estimated at approximately $180 million. The estimated value of materials and supplies that would be purchased locally (within San Diego County) during construction of SBRP is between $18.5 and $19.5 million. The effect on fiscal resources during construction will be from sales taxes realized on equipment and materials purchased in San Diego County and from sales taxes from expenditures. This economic activity would not adversely affect local revenue (Class III).

Impact S-2: Construction would disrupt the existing utility systems or cause a collocation accident (Class II)

Some service disruptions during construction could occur as part of power plant construction and construction of linear facilities. If service interruption occurred during construction, the impact would be significant and without notification of the public, this would significantly hinder activities in the surrounding areas. These impacts would be adverse but could be mitigated to less than significant levels with the implementation of the following mitigation measures from the Proposed Project (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measures for Impact S-2: Construction would disrupt the existing utility systems or cause a collocation accident (Class II)

S-2a Notification of utility service interruption.

S-2b Protection of underground utilities.

Impact S-3: Project construction and operation would increase the need for public services and facilities (Class II and Class III)

Water and Sewer. SBRP construction would not make significant adverse demands on local water, sanitary sewer, electricity, or natural gas systems. Impacts would involve the extension of existing utility lines. Water requirements for construction would be relatively small. Given the number of workers and temporary duration of the construction period, the impacts on the local water and sewer systems would not change the ability of the water suppliers to serve area demands (Class III).

Solid Waste. Construction waste generated by the construction of SBRP and demolition of on-site structures could affect the remaining capacities of local landfills Mitigation Measure S-3a (Recycle construction waste) would reduce this impact to a less than significant level (Class II).

Public Services. The schools in the Chatom Union Elementary School District and the Sweetwater Union High School District are currently not considered overcrowded (Anson, 2006; Peralta, 2006; Pippen, 2006). Construction of SBRP will not cause significant population changes or housing impacts to the region because most employees will commute to the site from areas within the County, as opposed to relocating to the area. As a result, SBRP construction will not cause a significant increase in demand for school services. The construction phase of the project may have minor impacts on emergency services, but with a peak workforce of about 400 workers, SBRP would not significantly burden public service providers, and it would not require the construction or expansion of facilities or services (Class III).

Mitigation Measure for Impact S-3: Project construction and operation would increase the need for public services and facilities

S-3a Recycle construction waste.

Socioeconomics, Services, and Utilities Operational Impacts for SBRP

Impact S-4: Property tax revenues and/or fees from project presence would substantially benefit public agencies (Class IV)

Local property tax revenues from the SBRP would benefit the local economy of the Port of San Diego or the City of Chula Vista. Potential changes to public agency revenues as a result of the SBRP are considered a beneficial impact (Class IV).

Impact S-5: Presence of the project would decrease property values (Class III)

There is public concern regarding potential impacts of power plant projects on property values. As such, the discussion of Impact S-5 under the Imperial Valley Link (see Section D.14.5.1) addresses in detail the issues associated with the potential for impacts on property values and industrial facilities such as power plants and transmission lines in an effort to provide the reader with detailed background information based on extensive literature review and the property value issues of past similar projects. In 1992, CEC staff reviewed the Analysis of Property Value Impacts of the Crockett Cogeneration Project, submitted by the Applicant for the Crockett Cogeneration Project. The Crockett analysis cites several studies that examine the impacts on property values of very large industrial facilities, such as nuclear power plants, industrial waste incinerators, and landfills. The Crockett analysis concluded that even for very large facilities that are extreme in terms of their potential health, safety, and aesthetic impacts, there is no clear association with diminished economic impacts (Analysis of Property Value Impacts of the Crockett Cogeneration Project, Appendix X, Crockett Cogeneration Project, 1992). Many other factors, such as affordability, age, size, schools, location, etc., play a larger factor in home sales. As is the case at SBRP, the new SBRP would also cause a reduction in structure prominence at the site and the low-profile design of the SBRP would result in less view blockage of background sky and mountains resulting in a beneficial visual impact, which is one of the components perceived to affect property values. Therefore, as discussed in Section D.14.5.1, any changes in property values would not be a substantial decrease and this impact is considered to be less than significant (Class III).

Socioeconomics, Public Services, and Utilities for SDCPP

Socioeconomics, Public Services, and Utilities Setting for SDCPP

The SDCPP would be located on the MCAS Miramar Station and near the City of Santee in San Diego County. The City of Santee has a median household income of $53,624 with family poverty levels below 3.8%. Santee is a rapidly growing middle-class community in the northeastern section of San Diego County. The SDCPP would be constructed within the MCAS Miramar Station on Department of Defense land granted to ENPEX through the 2003 Defense Authorization Bill HR 4546.

Construction and Operational Impacts

Socioeconomics Construction Impacts for SDCPP

Construction activity would disrupt public roadway operations in Santee (Impact S-2), but impacts would be less than significant with mitigation measures (Class II). Construction would create new demands on public utilities (Impact S-3), but the impact would be less than significant (Class III). This alternative component would not cause any change in revenue for local entities (Impact S-1, No Impact).

Impact S-2: Construction would disrupt the existing utility systems or cause a collocation accident (Class II)

All required linear utilities would be constructed in existing roadways or public ROWs within the City of Santee; however, new linear facilities would also be constructed within MCAS Miramar. ENPEX plans to notify local residence and businesses of any lane/road closures during construction activities. Interruption of existing utility services during construction could be unavoidable and without notification of the public, this would be an adverse impact. This impact could be mitigated to less than significant levels with the implementation of the following mitigation measures (Class II).

Mitigation Measures for Impact S-2: Construction would disrupt the existing utility systems or cause a collocation accident

S-2a Notification of utility service interruption.

S-2b Protection of underground utilities.

Impact S-3: Project construction and operation would increase the need for public services and facilities (Class III)

Water and Sewer. Water use during SDCPP construction would be a small fraction of the total water supply for the surrounding jurisdictions and would not change the ability of the water suppliers identified previously in serving the project area demands (Class III).

Solid Waste. Construction waste generated by SDCPP would not substantially affect the remaining capacities of local landfills to serve local demands (Class III).

Public Services. It is anticipated that the local construction workers would be used, so power plant construction would not induce growth as a result of construction worker in-migration. Therefore, the temporary addition of construction personnel would not substantially increase any demands on schools or hospitals or lower the level of service for fire protection or police protection, and it would not require the construction or expansion of facilities or services (Class III).

Socioeconomics, Public Services, and Utilities Operational Impacts for SDCPP

Power plant operation would create increased demands on public utilities (Impact S-3), and the impact would be significant and unmitigable for water and wastewater (Class I) and less than significant for solid waste and service personnel (Class III). Local tax revenues would not accrue on DOD land, so changes to public agency revenue would be beneficial but less than significant (Impact S-4, No Impact). Any change in property value caused by SDCPP operation would be adverse but less than significant (Impact S-5, Class III).

Impact S-5: Presence of the project would decrease property values (Class III)

The City of Santee has expressed concern that development of SDCPP within MCAS Miramar would adversely affect property values. Existing conditions include active use of the military base. Because the level of activity at the military facility would not be substantially altered with SDCPP, developing the SDCPP on the base would not result in significant changes to property values in the City of Santee.

The discussion of Impact S-5 under the Imperial Valley Link (see Section D.14.5.1) addresses in detail the issues associated with the potential for impacts on property values and industrial facilities such as transmission lines and power plants in an effort to provide the reader with detailed background information based on extensive literature review and the property value issues of past similar projects. As also discussed in Section D.14.5.1, any changes in property values would not be a substantial decrease and this impact is considered to ~~Therefore, impacts would~~ be less than significant. (Class III).

Socioeconomics, Public Services, and Utilities for Peakers

Socioeconomics, Public Services, and Utilities Setting for Peakers

Miramar, Pala, and Borrego Springs Substations. These existing substations are located in San Diego County. Baseline socioeconomic information for San Diego County is provided in Section D.14 (Socioeconomics, Services, and Utilities).

Margarita Substation. The existing Margarita Substation is located in Orange County. Baseline socioeconomic data for Orange County is provided in Table E.6.14-1.

Table E.6.14-1. Year 2000 U.S. Census Data – Orange County[56]

Population	2,846,289
Housing	935,287
Vacant units	34,197 (3.5%)
Employment	1,411,901
In construction trades	97,456 (7.3%)

Construction and Operational Impacts

Socioeconomics, Public Services, and Utilities Construction Impacts for Peakers

Construction activity would disrupt public roadway operations in Santee (Impact S-2), but impacts would be less than significant with mitigation measures (Class II). Construction would create new demands on public utilities (Impact S-3), but the impact would be less than significant (Class III). This alternative component would not cause any change in revenue for local entities (Impact S-1) because a minimal number of construction workers would be employed and would be from the project areas (No Impact).

Impact S-2: Construction would disrupt the existing utility systems or cause a collocation accident (Class II)

Utility lines serving the peakers would be constructed within existing city streets or SDG&E ROW. Interruption of existing utility services during construction would be unavoidable. Without notification of the public, this would be a significant adverse impact. This impact could be mitigated to less than significant levels with the implementation of the following mitigation measures (Class II).

[56] Ibid.

Mitigation Measures for Impact S-2: Construction would disrupt the existing utility systems or cause a collocation accident

S-2a Notify public of utility service interruption.

S-2b Protect underground utilities.

Impact S-3: Project construction and operation would increase the need for public services and facilities (Class III)

Water and Sewer. Water use during construction of peakers would be a small fraction of the total water supply for the surrounding jurisdictions and would not change the ability of the water suppliers identified previously in serving the project area demands (Class III).

Solid Waste. Construction waste generated by peaker projects would not substantially affect the remaining capacities of local landfills to serve local demands (Class III).

Public Services. The workforce for peaker projects would be approximately 40 people per site, and the local workers would not induce growth as a result of construction worker in-migration. Therefore, the temporary addition of construction personnel would not substantially increase any demands on schools or hospitals or lower the level of service for fire protection or police protection, and it would not require the construction or expansion of facilities or services (Class III).

Socioeconomics, Public Services, and Utilities Operational Impacts for Peakers

Power plant operation would create increased demands on public utilities (Impact S-3), but the impact would be less than significant for water, wastewater, solid waste, and public service personnel (Class III). Any change in property value caused by power plant operation would be adverse but less than significant (Impact S-5, Class III). Minimal local tax revenues would be provided by the peaker projects, and potential changes to public agency revenues as a result would be less than significant (Impact S-4, No Impact).

Impact S-3: Project construction and operation would increase the need for public services and facilities (Class III)

Water and Sewer. Peaker power plant operation and maintenance would use minimal water or sewer services. The change in service demand would not adversely affect suppliers (Class III).

Solid Waste. Waste generated by routine operation of the peakers would not substantially affect the remaining capacities of local landfills to serve local demands (Class III).

Public Services. Operation and maintenance of each peaker power plant would require a small number of workers who would be drawn from the local workforce. Therefore, the addition of these personnel would not substantially increase any demands on schools or hospitals or lower the level of service for fire protection or police protection, and it would not require the construction or expansion of facilities or services (Class III).

Impact S-4: Property tax revenues and/or fees from project presence would substantially benefit public agencies (Class IV)

Local property tax revenues are a function of tax rates levied within the affected jurisdictions. Power plant owners' property taxes would increase as plant construction. The State of California Board of Equalization (BOE) assesses infrastructure facilities annually. Dispersion of property tax revenue is

determined based upon the location of the taxable property. Any increase in property tax revenue as a result of the new plant would be a beneficial impact to the local economy.

The peakers would not result in an adverse change in public resource revenue. Furthermore, they would not preclude or limit the operations of any public agency or result in a change in revenue to any public agencies. Increases to public agency revenues as a result of the construction and operation of the peakers are considered a beneficial (Class IV) impact.

Impact S-5: Presence of the project would decrease property values (Class III)

The peaker projects would be located at or adjacent to existing substation sites that are currently in active use as electrical infrastructure. Developing a peaker project at an existing substation would not be likely to significantly change surrounding property values because the setting is already industrial (Class III).

Overall Socioeconomics, Public Services, and Utilities Impacts of the New In-Area All-Source Generation Alternative

Conventional Generation

For any power plant development under the New In-Area All-Source Generation Alternative, the overall impacts related to socioeconomics, service disruptions, and utilities, specifically waste generation, (Impact S-1 to Impact S-5) would be less than significant (Class II or Class III), except for the operational impact of water demand for evaporative cooling.

Normal operations of the power plants under the New In-Area All-Source Generation Alternative could involve substantially increased water demand due to cooling water use (Impact S-3), and this increased water demand could increase the need for local water supply facilities (Class I).

Renewable Generation

For overall impacts of the New In-Area Renewable Generation, please see Section E.5 (Solar Photovoltaics, Biomass/Biogas and Wind components).

E.6.15 Fire and Fuels Management

This section deals with the effects of the New In-Area All-Source Generation Alternative related to igniting wildfires and creating obstructions to fire suppression efforts, which could result in harmful and damaging impacts to existing facilities, community health/safety, firefighter health/safety, and natural resources. Hazardous materials associated with construction and operational activities under the New In-Area All-Source Generation Alternative may involve a risk of fire; this is addressed in Section E.6.10 (Public Health and Safety).

Fire and Fuels Management for SBRP

The SBRP would be located on an industrial site within the Port of San Diego. The San Diego County coast is thoroughly developed with urban and commercial areas, where the SBRP would involve essentially no risk of wildfire. Therefore, no fire or fuels management impacts would occur as a result of the SBRP.

Fire and Fuels Management for SDCPP

The SDCPP would be located in open space ~~with the exception of dirt roads and fuel breaks~~ in a Very High Fire Hazard Severity Zone as defined by Cal Fire. This section of the MCAS Miramar Station is primarily ridges and valleys. This site is surrounded by riparian corridors and the Padre Dam. There are two fire stations within close proximity to the SDCPP, Station #4 and Station #5. Station #4 is located on Cottonwood Avenue less than 4 miles from the site; whereas Station #5 is located on Carlton Oaks Drive less than 3 miles from SDCPP. Additionally, MCAS Miramar is proposing a new fire station in east Miramar less than 4 miles from the site.

Construction and Operational Impacts

Fire and Fuels Management Construction Impacts for SDCPP

Impact F-1: Construction activities would significantly increase the probability of a wildfire (Class II)

Construction activities for SDCPP would include use of large equipment that introduces the potential for a variety of wildfire ignition sources to surrounding vegetation fuels or combustible materials. The presence of construction equipment and construction personnel may increase the likelihood of a fire at or near the power plant site. Vegetation may be present in or near the construction areas and could be ignited by a spark or heat-related incident due to the operation of construction equipment or construction activities. The use of construction equipment such as earth movers, generators, vehicles, or chainsaws along with the personnel required to construct the power plant introduce the potential for a variety of wildfire ignition sources to surrounding vegetation fuels or combustible materials associated with project construction. Construction-related ignitions have the potential to escape initial attack containment and become catastrophic fires. The areas with heavy fuel loads, steep topography, and exposure to Santa Ana winds would have a higher burn probability and a higher potential for an ignition to escape.

Taking necessary precautions to avoid ignitions and preparing to immediately suppress all fire starts at construction sites would be required to prevent construction-related activities from developing into major fire events. Although the SDCPP would increase the risk of wildland fires, resulting in a signifi-

cant impact, this increase can be mitigated to a level that is less than significant (Class II) through the Implementation of mitigation measures F-1a, Develop and implement a Construction Fire Plan, F-1b, Ensure coordination for emergency fire suppression, and F-1c, Develop and implement an Integrated Vegetation Management Plan. Mitigation measure F-1a would reduce the number of additional project construction-related ignitions in the Poway Fireshed. Mitigation Measure F-1c would reduce the severity of construction-related ignitions that escape initial containment efforts by minimizing fuel loads in construction areas. The full text of the mitigation measures appears in Appendix 12.

Mitigation Measures for Impact F-1: Construction activities would significantly increase the probability of a wildfire

F-1a Develop and implement a Construction Fire Prevention Plan.

F-1c Ensure coordination for emergency fire suppression.

F-1d Remove hazards from the work area.

Fire and Fuels Management Operation Impacts for SDCPP

Impact F-2: Operation and maintenance activities would increase the probability of a wildfire (Class II)

Power plant and transmission line operation and maintenance equipment and personnel would introduce a variety of wildfire ignition sources that could light surrounding vegetation fuels or combustible materials. The long-term presence of the power plant and associated transmission facilities would provide a permanent source of wildfire ignitions. All natural gas lines would be filled with high-pressure natural gas. Natural gas is flammable and explosive under certain conditions. A release from any gas supply pipeline may result in a significant fire hazard.

Operation and maintenance of the SDCPP would reduce the potential for transmission line connections to contact vegetation or other potentially combustible materials. In addition, the SDCPP would have either (or both) a carbon dioxide gas extinguishing system and/or a water hydrant system on site. To reduce the amount of area that presents a damaging threat in the vicinity of the power plant, vegetation management would need to be implemented to reduce the fuel load around the facilities. The mitigation measures identified below would reduce the potential for fire caused by the power plant and associated linear infrastructure to a level that is less than significant (Class II).

Mitigation Measure for Impact F-2: Operation and maintenance activities would increase the probability of a wildfire

F-1c Ensure coordination for emergency fire suppression.

Impact F-3: Presence of the overhead transmission line would reduce the effectiveness of firefighting (Class III)

The 150-foot tall power plant stacks would present a minor aerial firefighting hazard by presenting a collision obstacle in reduced-visibility conditions associated with wildfires. Overhead transmission facilities associated with the power plant would be constructed within an existing ROW and only for a short distance from the new plant site, and would therefore present a very small additional obstacle to firefighting operations. These impacts would be adverse, but less than significant (Class III). No mitigation is required.

Impact F-4: Project activities would introduce non-native plants, which would contribute to an increased ignition potential and rate of fire spread (Class II)

Project activities create the potential for the introduction and spread of non-native, invasive plants. Non-native plants are often spread by human and vehicle vectors in areas of large-scale soil disturbance and importation. These actions along with the opening of the vegetation canopy through the clearing of trees and shrubs involved with the construction and maintenance of the project will contribute to the introduction and proliferation of non-native, invasive plants. Certain invasive plants, like cheatgrass, medusa head and Saharan mustard, can contribute to changes in wildfire frequency, timing and spread (Cal-IPC, 2007). Cheatgrass and medusa head, for example, dry out earlier in the season than native grasses creating fine fuels that are easily ignited. These fine fuels contribute to wildfires igniting earlier in the year and an increased level of fire recurrence. In addition, non-native grasslands have a 'spotting' effect during a wildfire, where embers from these grasslands are blown ahead of the fire line, contributing to an increased rate of fire spread. Invasive annual grasses also influence fire spread by creating a fine fuel continuum between patchy, perennial shrubs allowing wildfires to expand further into otherwise sparsely vegetated wildlands (USGS, 2007). Saharan mustard creates dense stands of dry vegetation in desert scrub and coastal sage scrub communities which increases the fire fuels in these otherwise low fire risk areas (Cal-IPC, 2007). The introduction and spread of specific invasive plants in the area surrounding the power plant will adversely influence fire behavior by increasing the fuel load, fire frequency and fire spread.

The introduction of non-native plants with an increased ignition potential and rate of wildfire spread is considered a significant impact (Class II) that can be mitigated by following the prevention and management protocol outlined in Mitigation Measure B-3a, Prepare and Implement a Weed Control Plan. The Weed Control Plan requires pre-construction and long-term weed surveys and implementation of control methods that require consultation and approval of the San Diego County Agriculture Commissioner and appropriate land-holding public agencies. Invasive weeds that influence wildfire behavior are considered a high control priority (such as cheatgrass [*Bromus tectorum*], Saharan mustard [*Brassica tournefortii*] and medusa head [*Taeniatherum caput-medusae*]) along with the priority species determined by the San Diego County Agriculture Commissioner and the California Invasive Plant Council (Cal-IPC, 2007). This measure also requires that proper actions are taken to prevent the introduction of invasive plants through materials and equipment used for the construction and maintenance of the generation facility and associated transmission lines.

Mitigation Measure for Impact F-4: Project activities would introduce non-native plants, which would contribute to an increased ignition potential and rate of fire spread (Class II)

B-3a Prepare and implement a Weed Control Plan.

Fire and Fuels Management for Peakers

Miramar, Pala, and Borrego Springs Substations. The existing Miramar, Pala, and Borrego Springs Substations are located in central or northern San Diego County. These areas are served by the North County Fire Protection District (NCFPD).[57] The district currently has 6 fire stations, 5 of which are staffed with full paid personnel supplemented by reserve Fire Fighters and one of which are all

[57] North County Fire Protection District. 2007. Information Website: http://www.ncfireprotectiondistrict.org. Accessed on May 9.

volunteer.[58] The district's primary service area is approximately 90 square miles with an estimated population of 45,000 people. The department also provides emergency medical services for an additional 40-square-mile outside the primary service area. There are 60 full time emergency services personnel, 14 support personnel, 20 reserve firefighters and 33 volunteer firefighters.

Margarita Substation. The existing Margarita Substation is located in Orange County. This substation is served by the Orange County Fire Authority (OCFA).[59] The nearest fire station to the substation is OCFA Station 58, located at 58 Station Way in Ladera Ranch.[60] Resources available within this facility are: 3 Captains, 3 Engineers, 6 Firefighters, 3 Fire Inspectors, and one Fire Engine.

Fire and Fuels Management Impacts for Peakers

Impact F-1: Construction activities would significantly increase the probability of a wildfire (Class II)

Construction activities for peakers would include use of large equipment that introduces the potential for a variety of wildfire ignition sources to surrounding vegetation fuels or combustible materials, stored in large quantities onsite. The presence of construction equipment and construction personnel may increase the likelihood of a fire at or near the power plant site. Vegetation may be present in or near the construction areas and could be ignited by a spark or heat-related incident due to the operation of construction equipment or construction activities. The use of construction equipment such as earth movers, generators, vehicles, or chainsaws along with the personnel required to construct the power plant introduce the potential for a variety of wildfire ignition sources to surrounding vegetation fuels or combustible materials associated with project construction. Construction-related ignitions have the potential to escape initial attack containment and become catastrophic fires. The areas with heavy fuel loads, steep topography, and exposure to Santa Ana winds would have a higher burn probability and a higher potential for an ignition to escape.

Taking necessary precautions to avoid ignitions and preparing to immediately suppress all fire starts at construction sites would be required to prevent construction-related activities from developing into major fire events. Although the peakers would increase the risk of wildland fires, resulting in a significant impact, this increase can be mitigated to a level that is less than significant (Class II) through the Implementation of mitigation measures F-1a, Develop and implement a Construction Fire Plan, F-1b, Ensure coordination for emergency fire suppression, and F-1c, Develop and implement an Integrated Vegetation Management Plan. Mitigation measure F-1a would reduce the number of additional project construction-related ignitions in the San Felipe Fireshed. Mitigation measure F-1b ensures open communication channels, unobstructed emergency access roads, and cessation of high-risk activities during wildfire events. Mitigation measure F-1c would reduce the severity of construction-related ignitions that escape initial containment efforts by minimizing fuel loads in construction areas.

Mitigation Measures for Impact F-1: Construction activities would significantly increase the probability of a wildfire

F-1a **Develop and implement a Construction Fire Prevention Plan.**

F-1c **Ensure coordination for emergency fire suppression.**

F-1d **Remove hazards from the work area.**

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[58] Ibid.

[59] Orange County Fire Authority. 2007. Information Website: http://www.ocfa.org/ocfamain.asp?pgn1=2

[60] Ibid.

Impact F-2: Operation and maintenance activities would increase the probability of a wildfire (Class II)

Power plant and transmission line operation and maintenance equipment and personnel would introduce a variety of wildfire ignition sources that could light surrounding vegetation fuels or combustible materials. The long-term presence of the power plant and associated transmission facilities provide a permanent source of wildfire ignitions. All natural gas lines would be filled with high-pressure natural gas. Natural gas is flammable and explosive under certain conditions. A release from any gas supply pipeline may result in a significant fire hazard. Additional combustible materials would be stored onsite, and any onsite explosions could ignite nearby wildland vegetation, resulting in a wildfire.

Regular maintenance at the peaker sites would reduce the potential for transmission line connections to contact vegetation or other potentially combustible materials. The mitigation measures identified below would reduce the potential for fire caused by the power plant and associated linear infrastructure to a level that is less than significant (Class II).

Mitigation Measure for Impact F-2: Operation and maintenance activities would increase the probability of a wildfire

F-1c Ensure coordination for emergency fire suppression.

Impact F-3: Presence of the overhead transmission line would reduce the effectiveness of firefighting (Class III)

The power plant stacks would present a minor aerial firefighting hazard by presenting a collision obstacle in reduced-visibility conditions associated with wildfires. Overhead transmission facilities associated with the peakers would be minimal, since the peakers are located at existing substations. Therefore, new transmission lines would present a very small additional obstacle to firefighting operations. These impacts would be adverse, but less than significant (Class III). No mitigation is required.

Impact F-4: Project activities would introduce non-native plants, which would contribute to an increased ignition potential and rate of fire spread (Class III)

Project activities create the potential for the introduction and spread of non-native, invasive plants. However, all of the peakers would be constructed at developed sites where there is little, if any, native vegetation. Therefore impacts would be less than significant (Class III)

Overall Fire and Fuels Management Impacts of the New In-Area All-Source Generation Alternative

The impacts related to fire or fuels management caused by new conventional power plants under the New In-Area All-Source Generation Alternative would be less severe than those described for the Proposed Project because these sites are more urban and have less vegetation creating fire risk. However, given the high fire risk throughout San Diego and Orange Counties, similar mitigation would be appropriate.

Conventional Generation

For any power plant and peaker development under the New In-Area All-Source Generation Alternative, the impacts related to a significant increase in the probability of a wildfire as a result of construction, operation and maintenance activities (Impact F-1 and Impact F-2) would be mitigable to a less than sig-

nificant level (Class II). Impacts relating to pre-fire vegetation management and the introduction of invasive species would be less than significant level (Class III) due to the developed areas around the sites. The power plant stacks would present a minor aerial firefighting hazard by presenting a collision obstacle in reduced-visibility conditions associated with wildfires (Impact F-3).

Renewable Resources

For overall impacts of the New In-Area Renewable Generation, please see Section E.5 (Solar Photovoltaics, Biomass/Biogas and Wind components).

E.6.16 References for New In-Area All Source Generation

CEC. 2003. Palomar Power Project Final Staff Assessment. January.

Gagliardo et al. (Gagliardo, Paul, Bill Pearce, and Ken Mortensen). 2005. Recycled Water Use in Cooling Towers: Issues and Solutions. City of San Diego.

OSHA (U.S. Department of Labor Occupational Safety and Health Administration). 2008. Legionnaires' Disease Source and Control: Section II:A. Cooling Towers, Evaporative Condensers, and Fluid Coolers. Online at http://www.osha.gov/dts/osta/otm/legionnaires/cool_evap.htm. Accessed on August 6.

SBRP AFC. 2006. South Bay Replacement Plant Application for Certification. Filed June 30, 2006. http://www.energy.ca.gov/sitingcases/southbay/documents/applicants/afc/index. Accessed December 4, 2007.

SDG&E. 2007. Application of San Diego Gas & Electric Company (U 902 E) for Approval of Power Purchase Agreements With J-Power, USA Development Company, LTD and Wellhead Power Margarita, LLC for Recovery of Costs, and for a Limited Exemption from the Requirements of Public Utilities Code Section 851. (A.07 05 023) Filed May 11, 2007. http://www.sdge.com/regulatory/tariff/PeakerRFOApplication.pdf. Accessed November 26, 2007.