CHAPTER ONE
EXECUTIVE SUMMARY

1.0 EXECUTIVE SUMMARY

1.1 PROJECT OVERVIEW

This Application for Certification (AFC) is for the construction and operation of a 696-megawatt (MW) combined cycle power plant in Rancho Cucamonga, California by San Gabriel Power Generation, LLC (SGPG), a wholly owned subsidiary of Reliant Energy, Inc. The existing Etiwanda Generating Station (EGS) is located at 8996 Etiwanda Avenue in Rancho Cucamonga, CA. The proposed project will be constructed on approximately 16.2 acres within the 60-acre EGS property, approximately one mile east of Interstate 15 (I-15) and 1.5 miles north of I-10 (see Figure 1.1-1). A portion of the proposed project's transmission line and internal road (approximately 0.8 acre) will occupy property currently owned by Inland Empire Utilities Agency (IEUA).

The proposed site is located adjacent to the planned Southern California Edison (SCE) 525-kilovolt (kV) Rancho Vista substation, which is planned to be constructed and in service by 2009. The site locale is primarily industrial. The nearest inhabitant to the proposed project site is a residence approximately 0.4 mile from the site, and there are approximately 6 residential parcels within ½ mile of the project site. The general location of the site is shown on Figure 1.1-1, which also shows the nearby local communities of Fontana and Ontario, and the County of San Bernardino.

The proposed facility, to be known as the San Gabriel Generating Station (SGGS), will incorporate two combustion gas turbines that will burn natural gas and a steam turbine driven with steam generated by two heat recovery steam generators (HRSGs). Each combustion gas turbine and the steam turbine will be connected to one of three separate electric generators. Output of the generators will be connected to step-up transformers and then to the new SCE switchyard. Except for the overhead transmission lines connecting to the SCE switchyard, no new transmission lines will be required for the proposed project. Existing capacity for transmission in the region will readily accommodate and deliver electric power from the proposed project. The SGGS will be interconnected to SCE's California transmission grid, and power generated by the facility will be available to serve energy needs throughout California.

The proposed project will use air cooling to reduce consumptive water use. The project will connect to the EGS' makeup water supply, which consists primarily of reclaimed water from the IEUA under an existing water services agreement.

Construction of the project is estimated to cost approximately $500 to 540 million dollars[1] and the SGGS is planned to begin commercial operation by July 1, 2010, after a 22-month construction period.

1.2 PROJECT OBJECTIVE

SGPG has identified several basic objectives for the development of an electric generating station at the Etiwanda site. These objectives include:

- To construct and operate a 696-megawatt (MW) natural gas-fired combined-cycle generating facility specifically designed to serve electricity power demand in the Southern California region.
- To provide competitively priced electric power for sale to electric service providers.
- To construct a facility at an existing Reliant-owned or controlled property to maximize the value of the public and private investment in the existing infrastructure.

[1] 2007 dollars.

- To help meet expected electrical demand growth in Southern California, including rapidly growing portions of San Bernardino and Riverside counties.
- To generate electric power at a location near the electric load, increasing reliability of the regional electricity grid and reducing regional dependence on imported power.
- To build new generation to coincide with the planned expansion of the transmission delivery system.
- To safely produce electricity and to do so without creating significant environmental impacts.

1.3 PROJECT BACKGROUND

Reliant Energy (Reliant) purchased the EGS from SCE in 1998. The EGS has been operating as an electric generating station since 1952. The existing facility is currently composed of four conventional gas-fired electric steam generating units (Units 1 through 4) and one set of peaking gas-fired simple cycle combustion turbine generation units (Unit 5). Units 1, 2, and 5 were retired in December 2003.

The proposed project will be constructed in the area previously occupied by the Units 1 and 2 cooling towers. The existing Units 1 and 2 cooling towers will be demolished before the proposed project construction begins due to the maintenance costs and potential safety concerns associated with these unused structures.

Ongoing activities at the EGS facility that are not part of the proposed project include demolition of EGS Units 1 and 2 cooling towers and capital and maintenance projects. Unit 1 and 2 were retired and their South Coast Air Quality Management District (SCAQMD) Permits To Operate (PTO) were surrendered in 2003. The cooling towers were constructed in 1952 and require maintenance to prevent them from becoming a fire and safety hazard. For that reason, the EGS has scheduled demolition of the cooling towers in 2008. EGS will be requesting approval of the demolition activities from the City of Rancho Cucamonga. The cooling towers will be demolished regardless of whether the SGGS obtains a license from the California Energy Commission.

Capital and maintenance projects that will be undertaken in 2007 include maintenance on the Unit 4 cooling tower, maintenance on Unit 3 and 4 condenser tubes, and relocation of the fire pumps, which draw water from the Units 1 and 2 cooling towers. Additionally, EGS will be completing projects begun in 2006, which include maintenance of the Unit 3 and 4 cooling towers, rebuilding condensate pumps for Units 3 and 4, and boiler repairs. In 2008, EGS plans to complete the capital and maintenance projects begun in 2007, in addition to upgrading the existing plant entrance and exit gates. These capital and maintenance activities will be undertaken regardless of whether the SGGS obtains a license from the California Energy Commission.

1.4 FACILITY DESCRIPTION

The proposed project will be constructed at the EGS, an existing power plant owned and operated by Reliant Energy Etiwanda, Inc. (a wholly owned subsidiary of Reliant Energy, Inc.). The EGS property (the existing plant location, which will include the proposed project) is bordered by Etiwanda Avenue to the east, an existing SCE switchyard and vacant SCE-owned land to the south (i.e., site of future Rancho Vista substation), undeveloped SCE-owned land to the west on which an LM6000 peaker plant is under construction, a parcel to the southwest owned by IEUA containing two water tanks, and Burlington Northern Santa Fe Railroad (BNSF) tracks to the north. The EGS property is approximately 60 acres in size.

The proposed combined cycle plant will use approximately 16.2 acres in the northwest portion of the EGS site, generally within the footprint of the area previously occupied by the Units 1 and 2 cooling towers to the west of Units 3 and 4, which will remain unchanged. A portion of the SGGS' transmission lines and an internal road will occupy property currently owned by IEUA. The location of the proposed SGGS, associated linear facilities, and offsite worker parking and equipment staging areas are shown on Figure 1.1-1. Permanent access to both the EGS and SGGS will be from Etiwanda Avenue. Figure 1.4-1 provides a photographic reproduction of the site prior to construction activities. A visual simulation of the site after construction is shown on Figure 1.4-2.

The proposed project will be constructed on the same parcel as the existing EGS facility. EGS generating units are located on Assessor's Parcel Number (APN) 022-928-379. The EGS site is located on Sections 8 and 17, Township 15, Range 6W on the Fontana U.S. Geological Survey (USGS) Quadrangle Map TCA 0820.

The SGGS will be a 696-MW combined cycle power plant to be constructed almost entirely within the existing Reliant EGS property in Rancho Cucamonga, San Bernardino County, California. The SGGS will be a 2×1 configuration that consists of two combustion turbine generators (CTG), two supplementally fired HRSGs, one steam turbine generator (STG), and ancillary equipment.

Major elements of the SGGS are summarized below:

- Addition of two 190-MW (nominal) natural gas-fired Siemens SGT6-5000F (Siemens 5000F) CTGs equipped with dry low NO_X (DLN) combustors and evaporative inlet air cooling;
- Addition of two 644 million British thermal unit per hour (mmBtu/hr) natural gas-fired HRSGs equipped with aqueous ammonia-type selective catalytic reduction (SCR) and oxidation catalyst systems for oxides of nitrogen (NO_X) and carbon monoxide (CO) control, respectively;
- Addition of one 340-MW (nominal) STG;
- Addition of an air-cooled condenser (ACC), commonly referred to as "dry-cooling," for heat rejection;
- Addition of natural gas compressors;
- Addition of one 15,000-gallon aqueous ammonia storage tank, associated ammonia unloading station, in-plant distribution piping, and ammonia vaporizer(s);
- Addition of two 150.5-foot-tall stacks equipped with continuous emissions monitoring systems (CEMS), each discharging the exhaust from one CTG/HRSG train;
- Addition of a water treatment system building and associated demineralization and evaporative cooler water tanks;
- Addition of a new control building for housing the SGGS plant distributed control system (DCS) and electrical equipment and warehouse for storage of equipment;
- Connection via a new 20-inch-diameter gas line to the existing Southern California Gas Company's gas transmission line, located approximately 200 feet east of the EGS property line.

- Addition of a single circuit 525-kV transmission line from the new generators to SCE's Rancho Vista substation/switchyard on SCE-owned property south of the SGGS site; and

- The underground fire loop will be fed from the existing EGS fire loop.

Approximately 15 acres of construction laydown and construction contractor parking will be located on property west of the EGS and SCE property and just east of I-15. Primary access to the project site during construction will be from the south via 6th Street. An approximately 3,120-foot-long temporary access road from 6th Street to the offsite construction area and the SGGS site will be constructed. After construction is completed, the route along the temporary access road will be restored or resurfaced as necessary and appropriate.

The proposed project's related linear facilities will include potable and makeup water lines, a process wastewater discharge line, a new fire loop connected to the EGS' upgraded fire loop system, and natural gas lines. A new septic system will be constructed on site for sanitary waste disposal. Except for the connection to the existing offsite gas line, all of the pipeline construction associated with the proposed project will be within the 60-acre EGS property.

Plant process wastewater will be discharged to the Los Angeles County Sanitation District through the IEUA's nonreclaimable industrial waste lines under the EGS' existing Industrial Wastewater Discharge permit. Storm water runoff will be directed to a new detention pond and then will be discharged to Chadwick Channel under the National Pollutant Discharge and Elimination System (NPDES) General Industrial Permit.

1.5 PROJECT OPERATIONS

Power produced by the plant will be sold into the wholesale energy market. Depending on market demand and the provisions of bilateral sales, in any given hour the plant may be operating at peak load, base load, part load with both or with one CTG running. Peak load operation will most likely occur during summer on-peak hours, and minimum load operation during nonsummer off-peak hours. Shutdown periods for annual maintenance will be scheduled during extended periods of low demand, which typically occur in the winter or early spring.

The design of the SGGS provides for a wide range of operating flexibility, i.e., an ability to start up quickly and operate efficiently during operating modes. Overall annual availability of the power plant is expected to be in the range of 92 to 96 percent. The power plant's output will depend on market conditions and dispatch requirements.

The new units will be Siemens Model 5000F CTGs, each with a California Independent System Operator (CAISO) baseload gross output of approximately 190 MW. Each CTG is designed and constructed to burn a single fuel (i.e., natural gas) with an evaporative cooling system installed on the inlet air for use when the ambient temperatures exceed 59°F. The fuel flow rate will be 2,042 mmBtu/hr (HHV). A combined cycle configuration will be established with the addition of HRSGs to the exhaust outlets of the CTGs and the addition of the STG. The STG will be equipped with an Alstom reheat, double-flow, side-exhausting condensing steam turbine with nominal throttle steam conditions of 2,400 pounds per square inch absolute (psia), 1,050°F, and 1,050°F reheat temperatures as well as a hydrogen-cooled generator with a peak generating output of approximately 340 MW (STG). Peak generating output of the STG will be accomplished with supplemental firing of the HRSGs. Given the retirement of Units 1, 2, and 5, the development of a combined cycle facility will significantly enhance the efficient use of the existing site infrastructure. The maximum supplemental duct-firing rate in the HRSGs will be 644 mmBtu/hr (HHV).

A DLN combustor system will be used to control the NO_X concentration exiting each CTG. As an additional post-combustion NO_X control system, an NO_X SCR system will be provided in each HRSG to

further reduce the NO_X emissions. The SCR system for each HRSG will inject an aqueous ammonia solution into the exhaust gas stream upstream of a catalyst bed to reduce the nitrogen oxides to inert nitrogen and water. An oxidation catalyst system will also be incorporated into the air quality control system to control emissions of carbon monoxide.

1.6 PROJECT SCHEDULE

The Application for Certification for the SGGS has been submitted to the California Energy Commission in April 2007 under the 12-month review and certification process. Construction and startup is expected to take at least 22 months. Construction will begin approximately at the beginning of September 2008 and the proposed project is scheduled to begin operating by July 1, 2010.

1.7 PROJECT OWNERSHIP

The project ownership is as follows:

- Owner – San Gabriel Power Generation, LLC
- Contracted Operator – San Gabriel Power Generation, LLC
- Transmission Facility Ownership – Southern California Edison Company

1.8 WATER SUPPLY

The project will use dry cooling technology, which will eliminate the large water supply required by wet-cooled power generation projects. Makeup water for evaporative cooling, HRSG makeup, and other minor in-plant uses will be supplied to the proposed project from the existing EGS makeup water supply reservoir. The reservoir receives water from four sources: reclaimed water, groundwater, MWD aqueduct water, and cooling water return. The primary source of water is reclaimed water supplied by the IEUA under an existing water services agreement. IEUA has a sufficient quantity of reclaimed water to supply all project water needs. Well water from three existing wells and MWD aqueduct water are only used as backup water supplies. Potable water will be supplied from the EGS' existing well water system and treated at a new water treatment plant. No new offsite water supply lines or interconnections will be required.

1.9 FUEL SUPPLY

The SGGS will burn natural gas fuel supplied by Southern California Gas Company (SoCalGas), the current supplier of natural gas to the EGS. The SoCalGas transmission lines run approximately 200 feet to the east of the EGS property line. SoCalGas will provide a pipeline tap and supply interconnection and a pressure reducing/metering station. The pressure reducing/metering station will be located within the EGS facility.

Natural gas will be the only fuel utilized by the two new CTGs and HRSG duct burners. Natural gas will be provided using existing pipelines serving the proposed project, which will have minor modifications and extensions of less than 0.2 mile to accommodate the SGGS.

1.10 TRANSMISSION

The proposed project site is located adjacent to SCE's transmission corridor. Three new generator step-up transformers will be connected to the new SCE 525-kV switchyard via aboveground lines supported from steel structures. The transmission lines will be routed south to the new SCE 525-kV switchyard. An 100-foot-wide, east-west transmission tower exclusion zone will be located directly south of the step-up transformers; this exclusion zone will be fenced. The southern most edge of this zone (the south fence) will be located on IEUA property (area north of the existing water tanks to the south of the SGGS).

An easement from IEUA will be acquired for this exclusion zone for the proposed project. The transmission lines from the plant will continue within a 100-foot-wide right-of-way directly south from the proposed project site to the recently approved but not constructed SCE switchyard to the south of the SGGS. The total length of the SGGS transmission line is approximately 1,100 feet.

Except for the overhead transmission lines connecting to the SCE 525-kV switchyard, no new transmission lines will be required for the proposed project. Existing capacity for transmission in the region will readily accommodate and deliver electric power from the proposed project. This will partly be a result of the replacement nature of the power (the proposed project will be replacing the power previously delivered from the site by Units 1, 2, and 5). This will also be in part due to the location of the EGS site in a load center. Breakers and circuit control features will be slightly modified to ensure power is delivered to the SCE grid in accordance with reliability and operating criteria.

1.11 PROJECT ENVIRONMENTAL FACTORS

Impacts that the proposed project may have on the environment have been evaluated in detail. The SGGS would avoid or minimize potential environmental impacts through project siting and design, and incorporation of mitigation measures. As a result, the SGGS would have no significant environmental impacts.

1.11.1 Air Quality

The proposed project would not have a significant adverse impact on air quality. The project would generate emissions of criteria pollutants including NO_X, CO, reactive organic compounds (ROCs), sulfur dioxide (SO_2) and particulates less than or equal to 10 microns in diameter (PM_{10}). Emissions of NO_X, ROCs, SO_2, and PM_{10} will be fully offset by providing emission reductions from other regional emission sources or from local sources. CO emission offsets are not required because the South Coast Air Basin will be redesignated as attainment for this pollutant in 2007.

In addition, the facility will incorporate the following state-of-the-art air pollution controls that reflect Best Available Control Technologies (BACT) to reduce emissions:

- Dry low NO_X burner technology and SCR to reduce NO_X emissions to 2 parts per million (ppm) @ 15 percent oxygen (O_2) dry.[1]
- An oxidation catalyst to limit CO emissions to 2 ppm @ 15 percent O_2 dry and ROC emissions to 2 ppm @ 15 percent O_2 dry.
- Pipeline-quality natural gas as a primary fuel to limit SO_2 and PM_{10} emissions.

The modeling analysis conducted for nitrogen dioxide (NO_2), CO, SO_2, and PM_{10} is presented; the results show that the project, with the planned emission control systems, would neither cause an exceedance of the California and National Ambient Air Quality Standards (CAAQS and NAAQS), nor contribute significantly to an existing exceedance. Additional modeling results demonstrate that the project would not cause an incremental impact above the significant impact thresholds under the federal Prevention of Significant Deterioration (PSD) program. Air quality–related values (AQRVs) are also evaluated; no significant impact to visibility, terrestrial or aquatic resources in Class I areas is predicted.

[1] The NO_x rate was reduced to 1.9 ppm only when the units are at baseload and the duct burners are on. This was required due to the new requirements in the SCAQMD's Priority Reserve rule.

1.11.2 Biological Resources

Biological impacts have been minimized by siting proposed facilities within an existing power plant facility. Access to the SGGS during operations will be provided through the EGS entrance and via onsite access roads. One bridge across Chadwick Channel will be constructed to provide access to the new facility.

Based on surveys conducted to date, no special-status plants would be affected by the proposed project. Potential habitat for the Delhi Sands flower-loving fly may be present on the proposed offsite construction laydown area located west of the SGGS site. If habitat is found to be suitable, then mitigation measures, either habitat restoration or participation at an authorized regional mitigation bank, would be implemented to eliminate or reduce this impact to a less-than-significant level.

The San Bernardino kangaroo rat and the burrowing owl could be present within the proposed offsite construction laydown area and mitigation measures to eliminate or reduce potential impacts to less-than-significant levels during project construction will be implemented.

1.11.3 Cultural Resources

Consultation with six Native American individuals/organizations was initiated based on information provided by the Native American Heritage Commission. Four responses have been received to date, and all information received will be considered as the permitting process moves forward. Site-specific surveys conducted for the proposed project, including laydown areas, did not identify significant archaeological or built environment resources. Given the extent of previous disturbance at the site, it is unlikely that intact archaeological deposits exist undiscovered within the site. However, mitigation measures are identified in the unlikely event that this would occur. With implementation of mitigation measures, impacts would be less than significant.

1.11.4 Land Use

The proposed project is located within an existing industrial facility in the portion of the City of Rancho Cucamonga designated for heavy industrial use. The site is part of the city's designated Industrial Area Specific Plan. The SGGS is compatible with the land use designations and zoning, and with applicable land use plans and policies. Land use impacts would be less than significant.

1.11.5 Noise

Construction noise would temporarily elevate the noise levels in the surrounding community. Most often the sound levels would be moderate, with a few processes causing short-term, substantially elevated noise levels to occur. With mitigation measures, construction noise impacts would be less than significant. The proposed project has been designed with substantial noise control features to meet the stringent requirement of 55 dBA (decibels on the A-weighted scale) at night at nearby residences located within the City of Rancho Cucamonga. Operational noise impacts would be less than significant.

1.11.6 Public Health

Because project construction will be of short duration, significant long-term public health effects are not expected to occur as a result of construction. During operation, the proposed project will be fueled with clean-burning natural gas to minimize potential toxic air emissions. The maximum incremental cancer risk from project emissions is estimated to be 0.352 in one million, which is well below the significance criterion of 10 in 1 million and the Priority Reserve threshold of 0.5 in a million. For sensitive receptors, the maximum chronic total hazard index (THI) and the maximum acute THI are both estimated to be less than the significance criterion of 1.0 and the Priority Reserve threshold of 0.1. Based on this evaluation using conservative assumptions, SGGS emissions are expected to pose no significant cancer or non-cancer health effects. As demonstrated by the air quality analysis, criteria pollutant emissions from the SGGS would not cause or contribute to violations of federal or state ambient air quality standards, which have been set at levels designed to protect public health. No significant adverse health effects from criteria pollutant emissions are anticipated.

1.11.7 Worker Safety and Health

Worker exposure to physical and chemical hazards would be minimized through adherence to appropriate engineering design criteria, implementation of appropriate safety and administrative procedures, use of personal protective equipment, and compliance with applicable health and safety regulations. Impacts would be less than significant.

1.11.8 Socioeconomics

The proposed project would have a positive impact on fiscal resources in the city and in the region. The estimated property tax that will accrue to the county will be approximately $5.4 million per year.[2] Construction will occur over a 22-month period, and total construction costs are estimated to be approximately $109 million for payroll and $412 million for materials, supplies and equipment. An estimated $53 million would be spent within the four-county area on materials and supplies, with the remaining $359 million purchased elsewhere.

Estimated indirect and induced effects of construction that would occur within the four-county area would include an additional 1,040 jobs, $46 million in labor income, $7.7 million in indirect business taxes, and approximately $136 million in output (spending for materials and supplies, plus value added – employee compensation, proprietary income, other property income, and indirect business taxes).

During operation, labor costs would be approximately $3.9 million per year, most of which would likely be spent in the four-county area. Nonlabor operational costs would be approximately $10.4 million per year, approximately 40 percent of which would be spent in the four-county area.

The majority of the construction workers would be expected to be hired from within the four-county area, including San Bernardino, Riverside, Los Angeles and Orange counties. Given the substantial available construction force in San Bernardino County alone, as well as in the surrounding three counties, it is expected that an adequate labor force within daily commute distance would be available to support the project.

The construction and operation of the SGGS would not have a significant adverse impact on law enforcement, fire, emergency, medical, utility, or educational services. The project would not create a disproportionate impact on any low income or minority populations.

1.11.9 Soils

The proposed project will be built within an existing industrial facility. The erosion characteristics of the soil types on the project site range from slight to moderate. With Best Management Practices incorporated into the project, impacts from soil erosion would be less than significant.

1.11.10 Traffic and Transportation

Access to the project site will be from I-15 and I-10 via Etiwanda Avenue. From Etiwanda Avenue, construction vehicles would primarily use 6th Street and a temporary north-south road to access construction parking, laydown areas and the project site. Construction traffic would be less than 500 daily round trips for approximately 17 months out of the 22 months of construction. During the peak construction month in August 2009, there would be an estimated 1,014 workers traveling to the project site. With carpooling, approximately 900 peak daily round trips are anticipated. Approximately 40 percent of the workers are expected to arrive prior to the morning peak period and leave the site during

[2] This is an estimated number and is subject to asset depreciation and is based on average cost of construction in 2007 dollars.

the evening peak period after a 10-hour work schedule. During the peak construction period, all local traffic study area roadway segments are forecast to operate at LOS C or better and would meet the City of Rancho Cucamonga's level of service standard. Peak hour intersection LOS during the peak construction period would result in some delay over no-project conditions, but all intersections would operate at LOS C or better, except for the intersection of Etiwanda Avenue/6th Street, which would operate at LOS D. Construction trips would not result in a significant change to the Level of Service on the local access roads, which will be a noticeable but less-than-significant impact. Without project construction, nearby segments of I-15 and I-10 are projected to operate at LOS E or F during the a.m. and p.m. peak periods and at LOS B, C, or D during non-peak periods. Project construction would temporarily add trips to these segments, but would not result in further deterioration of already impacted LOS or reduce non-peak hour LOS to worse than LOS D, which would be a less-than-significant impact.

During plant operations, a total of 18 peak daily round-trip employee trips and 6 delivery trips are anticipated. This would not change the existing Level of Service on local or freeway access roads or intersections and would be a less-than-significant impact.

1.1.1 Visual Resources

The proposed project will be sited within existing industrial uses. In general, short-term construction impacts are not expected to lead to visual impacts of greater severity than those of project operation, and are not expected to lead to significant impacts due to their temporary nature. The plant would be visible from unblocked surrounding views within an approximately 5-mile radius to the north, east, west, and south. Existing industrial features and the topographic backdrop result locally in open views to the plant, which reduce the visual impact. Project features designed to reduce visual impacts include color chosen to blend with the EGS, use of non-reflective materials, shielded and controlled lighting using high-pressure sodium vapor fixtures, and revegetation of disturbed areas after construction. Visual modification range from not-noticeable to noticeable, and impact levels range from low to moderate. These impacts would be less than significant.

1.1.2 Hazardous Materials Handling

Minimal storage of hazardous materials would occur on site. Hazardous materials would include aqueous ammonia for the SCR system, various water additives and water treatment chemicals including acids and caustics, various cleaning chemicals, and hydrogen (in maximum quantities of 24,000 standard cubic feet) for generator cooling. Equipment and containers would be located inside containment berms, and incompatible materials would be stored in separate containment areas. Areas susceptible to potential leaks or spills will be paved and bermed. Piping and tanks will be protected from potential traffic hazards by concrete and/or steel barriers. The SGGS will implement accident prevention and mitigation measures to reduce the risk associated with the use and storage of hazardous materials. Analyses of public health impacts associated with a hypothetical release of ammonia indicate that the predicted worst-case scenarios would not result in a predicted impact exceeding any of the toxic endpoint concentrations at the nearest offsite receptor locations. Therefore, the potential impacts of these release scenarios would be less than significant.

1.1.3 Waste Management

Wastes generated by the SGGS during construction and operation of the facility will be recycled to the extent practicable. Wastes would include nonhazardous solid and liquid wastes (e.g., scrap metal and sanitary waste) as well as hazardous solid and liquid wastes (e.g., spent SCR and oxidation catalyst and waste lubrication oil). Appropriate procedures and personnel training would provide assurance that nonhazardous and hazardous wastes are properly handled and do not significantly affect the environment or health and safety.

Disposal of nonhazardous waste from the plant would not significantly impact the capacity of the Class II and III waste disposal facilities identified as available for use by the project. Similarly, hazardous waste generation and disposal from the SGGS would be minimized by recycling and would not significantly impact the capacity of Class I hazardous waste disposal facilities identified as available for use by the project.

1.11.14 Water Resources

The SGGS is proposed as a "dry-cooled" facility. This is an environmentally friendly technology that reduces water demand for power plants by several thousand acre-feet per year. The project would connect to the EGS' makeup water supply, which consists primarily of reclaimed water supplied by a local provider, the IEUA. Average annual water use during operations would not exceed 240 acre-feet per year.

Process wastewater would be discharged to the Los Angeles County Sanitation District through the IEUA's nonreclaimable industrial waste lines under the EGS' existing Industrial User's permit. Sanitary wastewater would be discharged to a new onsite septic system.

Other project features designed to be protective of water quality include a sedimentation/detention basin to collect and manage storm water runoff from the project site, and secondary spill containment around chemical delivery and storage areas, diesel fuel tanks and transformers. The site is not located in a floodplain. Impacts to water resources would be less than significant.

1.11.15 Geologic Hazards and Resources

No significant geological or soil-related impacts are anticipated from the construction or operation of the proposed plant. Final foundation design would incorporate mitigation measures designed to reduce impacts from moderate earthquake motions.

1.11.16 Paleontological Resources

Literature and archival reviews, as well as pedestrian surveys, did not provide evidence that any paleontological resources would be affected by the construction or operation of the SGGS. While the site is located in an area of high paleontological sensitivity, mitigation measures are identified during construction to reduce potential impacts to a less-than-significant level.

1.12 PROJECT ALTERNATIVES

A range of reasonable alternatives that could feasibly attain the objectives of the proposed SGGS were identified and evaluated. These alternatives included:

- The "No Project" alternative (that is, not developing a new power generation facility);
- Alternative site locations for constructing and operating the SGGS, both within the historic property boundaries of the EGS property and on vacant industrial sites;
- Alternative air pollution emission control technologies; and
- Alternative generation technologies.

The proposed 2 on 1 combined cycle base load plant within the EGS property was selected over other onsite configurations because of space constraints, distance from sensitive receptors and cost-effectiveness. Offsite locations were rejected since these sites would require longer offsite connections to

transmission lines and gas lines and would require additional construction because of the lack of availability of shared facilities. In addition these offsite locations would not reduce any unmitigated impacts associated with development of the preferred site.

To comply with the SCAQMD's BACT requirements for oxides of nitrogen (NO_X), the project's design includes dry low NO_X combustion controls on the gas turbine and selective catalytic reduction (SCR) to control NO_X emissions. To comply with SCAQMD's BACT requirements for carbon monoxide (CO) a CO catalyst will be employed. Other air pollution emission control technologies were evaluated and rejected due to lack of commercial availability and implementability. Alternative generation technologies were similarly evaluated based on commercial availability, implementability, and cost-effectiveness and rejected. The SGGS' proposed use of dry cooled technology using primarily reclaimed water is also the most environmentally advantageous and economically feasible option.

Source:
2004 DeLorme, Topo USA 5.0
www.delorme.com

0 20 40
Scale in Miles

N

SITE VICINITY MAP

San Gabriel Generating Station
San Gabriel Power Generation, LLC
Rancho Cucamonga, California

April 2007
28067169

URS

FIGURE 1.1-1

4/06/07 vsa ..\Reliant Etiwanda\Graphics\1.0 Introduction\1.1-1_svm.cdr

Source:
KOP_03_existing: View from Victoria Woods Apartments - Existing Condition

VIEW OF EXISTING EGS FACILITY

San Gabriel Generating Station
San Gabriel Power Generation, LLC
Rancho Cucamonga, California

April 2007
28067169

URS

FIGURE 1.4-1

3/28/07 vsa ..\Reliant Etiwanda\Graphics\1.0 Introduction\1.4-1_existing.cdr

Source:
KOP_03_simulation: View from Victoria Woods Apartments - Simulation Showing Proposed Project

SIMULATION OF EGS FACILITY WITH PROPOSED PROJECT

San Gabriel Generating Station
San Gabriel Power Generation, LLC
Rancho Cucamonga, California

August 2007
28067169

URS

REPLACEMENT FIGURE 1.4-2

8/14/07 vsa/hk ..\Reliant Etiwanda\Graphics\Amendment_Project Description\REV 1.4-2_sim view.cdr