

## 1.1 INTRODUCTION

The Canyon Power Plant (CPP) is a proposed simple-cycle power generation project that consists of a nominal 200-megawatt (MW) plant, using four natural gas-fired General Electric LM 6000PC Sprint combustion turbines. The proposed plant will be owned by the Southern California Public Power Authority (SCPPA), and the City of Anaheim (COA) will be the Project Manager and Operator once the plant is built.

The CPP will be located on approximately 10 acres of disturbed land located at 3071 East Miraloma Avenue within an industrial area of the COA. Main access to the CPP site will be at the southeast corner of the project site from East Miraloma Avenue. A second gated entrance will be accessible via East Miraloma Avenue with a third gate off the alley to the east of the site.

The CPP is strictly dedicated for generating power to serve the COA's retail customers. Current load/resource balances for the COA show a significant power shortage during the summer period. As a result the output of the plant will be utilized to serve native load within the COA and to meet resource adequacy requirements.

This Application for Certification (AFC) has been prepared in accordance with the California Energy Commission's (CEC's) Rules of Practice and Procedure and Power Plant Site Certification (August, 2000), as amended, and is intended to provide:

- A detailed description of the proposed CPP project
- An assessment of the anticipated project impacts on the existing environment
- A discussion of compliance with applicable laws, ordinances, regulations, and standards

The remainder of this Executive Summary summarizes the more detailed information presented in the balance of the AFC.

## 1.2 FACILITY DESCRIPTION

The project will include the construction and/or installation of the following components:

- **Proposed CPP site.** In addition to the four natural gas-fired GE LM 6000PC Sprint gas turbines, the plant will include generator step-up transformers (GSUs), a 69 kilovolt (kV) switchyard, onsite fuel gas compressors, a gas pressure control and metering station, a packaged chilled water system for combustion turbine engine (CTG) power augmentation with associated heating ventilation and air conditioning (HVAC)-type four-cell cooling tower, selective catalytic reduction system (SCR) emission control systems, and other associated plant infrastructure.

- **Gas Pipeline.** Natural gas will be provided via a new 3,240-foot-long, 12-inch, and 350 pounds per square inch gauge (psig) gas line owned and maintained by SoCal Gas Company (SCGC), which will be connected to new onsite fuel gas compressors that will be part of the CPP facility. From the CPP site, this new pipeline will run approximately 580 feet east in East Miraloma Avenue to Kraemer Boulevard, then north 2,660 feet in Kraemer Boulevard to East Orangethorpe Avenue to connect into SCGC's transmission line L-1218 in East Orangethorpe Avenue. (Total land disturbance will be 0.219 acre.)
- **Process water.** Process water for the project will be recycled water supplied from the Orange County groundwater replenishment system (GWRS) via a new 2,185-foot-long, 14-inch pipeline utilizing a new offsite booster pump station. The water pipeline will run east of the site on the north side of East Miraloma Avenue for 1,850 feet to the new pumping station located north of the curb in the COA-owned easement of East Miraloma Avenue, then north 210 feet in new easement from the Orange County Water District (OCWD), then 125 feet easterly in new easement to the GWRS line on the western side of the Carbon Canyon Diversion Channel. There it will connect to the 60-inch-diameter GWRS recycled water line at an existing 36-inch stub up. (Total land disturbance for both line and pumping station will be 0.246 acre.)
- **Electrical interconnection.** Underground 69 kV cables will connect from GSUs to the onsite switchyard, which will use gas-insulated switchgear (GIS). There will be four new underground 69 kV circuits leaving the site. Two will proceed underneath and to the south side of East Miraloma Avenue approximately 100 feet to rise up and connect to the existing 69 kV overhead Vermont-Yorba lines via two new transition structures. The second two 69 kV underground circuits will proceed eastward approximately 4,000 feet in East Miraloma Avenue, turn south on Miller, then proceed approximately 3,000 feet to connect to the Dowling-Yorba 69 kV line at East La Palma Avenue. (Total land disturbance for both sets of cables will be 0.489 acre.)
- **Communications.** Fiber optic cable will run in a common trench with the approximately 7,000-foot 69 kV electric cables, where it will tie into existing underground fiber optic cable for the supervisory control and data acquisition (SCADA) system.

Plant process wastewater such as blowdown from the chilled water system cooling tower, reject water from the demineralization system, and domestic sanitary wastewater, will be combined to discharge into the sewer system connection located on East Miraloma Avenue.

Stormwater will be collected onsite and treated in a solids separation and oil separation vault prior to flowing into a percolation chamber where the collected water will percolate onsite into the groundwater aquifer. During large storms that would exceed the 25-year storm event, the percolation basin will be directed via a pipe to the COA stormwater drainage system.

The plant's design will incorporate air pollution emission controls designed to meet the stringent standards required by the State and the South Coast Air Quality Management District (SCAQMD). These controls will include water injection for the combustion turbines, a SCR to control oxides of nitrogen (NO<sub>x</sub>) emissions, and an oxidation catalyst system to control carbon monoxide (CO) and volatile organic compound (VOC) emissions.

### **1.3 FACILITY LOCATION**

The CPP is located within the COA in northern Orange County. North of the project area, the COA is bordered by the City of Placentia. To the south, the COA is bordered by the Santa Ana River corridor, the City of Orange and a small unincorporated area within Orange County. The Santa Ana River corridor runs east-west approximately one mile south of the project area.

The COA in the study area is served by several major freeways. State Route (SR) 57 runs north-south through the COA approximately one mile to the west of the project area. SR 91 runs east-west through the COA approximately one mile south of the project area.

Directly east of the project area are several groundwater recharge facilities operated and maintained by the OCWD. Kraemer Basin, a groundwater recharge facility, is located directly east of the project area.

### **1.4 WATER SUPPLY AND DISCHARGE**

The OCWD in cooperation with the Orange County Sanitation District (OCSD) has developed a comprehensive water recycling program entitled GWRS (Groundwater Replenishment System). The program treats sanitary waste to develop a water source that meets State of California Title 22 water quality requirements.

Plant raw water for process needs will come from GWRS water via a new underground pumping station to be installed by the COA as part of the CPP project (see Figure 3-11). The pumping station will include redundant 500 gallons per minute (gpm) capacity pumps and supply water via a new 14-inch pipeline routed along East Miraloma Avenue to the plant site. Annual maximum recycled water consumption is expected to be approximately 74 acre-feet of GWRS water.

Sanitary water services and fire water will use COA potable water. COA potable water lines are currently routed along East Miraloma Avenue and are a normally available utility. The potable water system will also serve as backup to the GWRS supply in the event the GWRS line is unavailable.

The CPP's process wastewater will be discharged directly into the OCSD sewer system.

**1.5 TRANSMISSION FACILITIES**

Four new underground transmission cables will exit the substation and will be looped into the existing 69 kV Vermont-Yorba and Dowling-Yorba lines.

The onsite interconnection facilities will consist of 69 kV outdoor gas insulated switchyard with a sun shelter, high-voltage disconnect switches, high-voltage circuit breakers, metering and relaying devices, foundations, ground grid, fencing, and all other components necessary to connect the output of the generators to the system. The new sections of the transmission cables will be underground except the two riser poles located in front of the site and south of East Miraloma Avenue. See Section 4.0 for additional information on the proposed transmission facilities.

**1.6 PROJECT SCHEDULE**

Construction of the generating facility from site preparation, demolition, and grading, to commercial operation is expected to take approximately 12 months. The CPP is expected to be operational by the third quarter 2010.

**1.7 SUMMARY OF ENVIRONMENTAL IMPACTS**

The proposed project has the potential to adversely impact the existing environment. In order to limit potential project impacts to insignificant levels under normal operating conditions, the Applicant has carefully chosen the CPP location and incorporated innovative design measures. Section 6.0 of this AFC assesses environmental impacts according to the following areas of study:

- 6.2 Air Quality
- 6.3 Geologic Hazards and Resources
- 6.4 Agriculture and Soils
- 6.5 Water Resources
- 6.6 Biological Resources
- 6.7 Cultural Resources
- 6.8 Paleontological Resources
- 6.9 Land Use
- 6.10 Socioeconomics
- 6.11 Traffic and Transportation
- 6.12 Noise

- 6.13 Visual Resources
- 6.14 Waste Management
- 6.15 Hazardous Material Handling
- 6.16 Public Health
- 6.17 Worker Safety
- 6.18 Cumulative

Collectively, these studies contained in Section 6.0 show that the proposed CPP project will result in less-than-significant impacts to the surrounding area. The project as designed will comply with all applicable environmental LORS.