2.1 PROJECT OVERVIEW

The Canyon Power Plant (CPP) will consist of a nominal 200-megawatt (MW) simple-cycle plant, using four natural gas-fired General Electric LM 6000PC Sprint combustion turbines and associated infrastructure. The project site is located at 3071 East Miraloma Avenue, in a City of Anaheim (COA)-designated industrial zone. The project site and linears are shown on Figure 3-1.

The CPP and associated construction laydown areas will be located on approximately 10 acres of disturbed land located at 3071 East Miraloma Avenue. 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. (Total land disturbance will be approximately 10 acres.)

The existing CPP site is predominantly paved (concrete and asphalt). Principal land use for the site was food catering for a fleet of approximately 75 to 100 trucks, formerly operated by Orange County Food Service. Onsite structures include a kitchen/warehouse building, maintenance garage (9 service bays), truck wash facility (5 bays), two ice manufacturing buildings, several storage sheds, and an outdoor truck repair shop which includes storage lockers and petroleum products, all of which will be demolished as a part of the CPP project.

The following activities are not part of the CPP project:

- Three residential houses along East Miraloma Avenue have recently been removed and are not a part of this Application for Certification (AFC). The COA Risk Manager and Fire Department determined that the residential units posed security and fire risks, and therefore they were removed. A letter from the COA Risk Manager to the Public Utilities Department is included in Appendix Q.
- Soil remediation activities associated with Phase I, Phase II, and Supplemental Phase II reports. The COA, now as owner of the property, has determined that it will conduct any soil remediation activities to limit its environmental liability for future uses of the site. These activities will occur regardless of whether the CPP project obtains a CEC license.
- Installation of a temporary, 8-foot-high security fence around the perimeter of the entire 10-acre site.
- General maintenance activities including site cleanup and trash removal.

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, 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.

2.1.1 Southern California Public Power Authority

The Southern California Public Power Authority (SCPPA) is a consortium of municipalities and an irrigation district established by a Joint Powers Agreement to develop, construct, and operate electric generation and transmission projects. SCPPA is the proponent and the owner of the CPP. The COA is the sole participating member city. The COA will be the Project

Manager and Operator and the output of the plant will be used to serve native load within the COA and to meet resource adequacy requirements.

2.1.2 Need for the Project

The CPP is strictly dedicated for generating power to serve the COA's retail customers. Currently the COA load/resource balance indicates that the COA is significantly short of power during the summer period.

The COA's resource mix includes the renewable portfolio requirements as well as reliability mandates and currently includes contracts for 36 MW of wind energy, 8 MW of geothermal, and 5 MW of landfill gas (expected to expand to 25 MW by 2010). However, most of this renewable energy is treated as non-firm energy and as such cannot be counted towards the COA's resource adequacy requirements.

The CPP also assists the COA in meeting its reliability mandates for load-serving entities in California. The COA is required to carry 15 percent above its peak demand as capacity reserves by both AB 380 (Resource Adequacy) and by the California Independent System Operator (CAISO). In addition, the CAISO requires considerable generation be provided in the Los Angeles Basin for local reliability purposes. Based on the 2008 Local Capacity technical assessment study by the CAISO, the COA is obligated to have 350 MW as Basin generation (CAISO, 2007). Currently the COA has only one peaking unit in the Basin; it has a capacity of 46 MW. Therefore the COA currently relies on other generating resources outside California to meet load. Building the CPP within the COA helps offset that obligation.

Per CAISO tariff (both existing and those filed under MRTU operations planned for 2008) the COA is required to bid the resources designated for resource adequacy (15 percent above peak) into the CAISO's day-ahead market. Section 40.4 of the tariff addresses the CAISO's requirements, so COA expects that a portion of the new turbines will be bid into the CAISO's market; the remainder will be idle capacity.

2.1.3 Project Objectives

The primary objectives of the CPP include:

- Construct and operate a natural gas-fired simple cycle generating facility that can provide peak load generation to support the local peak demand, local reliability, and reserve margins for the COA.
- Develop a site consistent with community planning at a location that is supported by the local community.
- To site the project with ready access to natural gas and electrical interconnection.

- Safely produce electricity without creating significant environmental impacts.
- Reduce reliance on out-of-state imported energy.
- Provide a back-up for as-available wind energy.
- To build new generation that requires minimal additional project-specific transmission system upgrades.

2.2 REFERENCES

California Independent System Operator (CAISO), 2007. 2008 Load Capacity Technical Analysis. March 9.