

I. PROJECT PURPOSE AND DESCRIPTION

Palomar Energy, LLC (“Applicant” or Palomar Energy) filed an application for the Palomar Energy Project (“Project”), a nominally rated 550-megawatt (MW) natural gas-fired, combined-cycle power plant. The Project will be located in the City of Escondido in San Diego County (RT, p. 32).

Project Ownership

The Applicant, Palomar Energy, LLC is a Delaware limited liability company whose sole member is a subsidiary of Sempra Energy Resources (SER) (Exhibit 1, p. 1-1).

Power Plant Site and Facilities

The project consists of a natural gas-fired, combined cycle power plant with a nominal electrical power output of 550 MW, along with associated reclaimed water supply and brine return pipelines. The power generating facilities will consist of two General Electric 7FA combustion turbine-generators (CTGs) provided with evaporative inlet air coolers, two multi-pressure heat recovery steam generators (HRSGs) equipped with duct burners, and one reheat condensing steam turbine-generator (STG). To control air emissions, the CTGs will be equipped with dry low NOx combustors, and the HRSGs will include selective catalytic reduction and an oxidation catalyst (Exhibit 1, Section 2; Exhibit 35, Direct Testimony of Joseph Rowley, Project Description, p. 3; RT, pp. 29-32).

At full load, each CTG generates approximately 165 MW at average ambient conditions. Heat from the CTG exhausts is used in the HRSGs to generate steam and to reheat steam. With the CTGs at full load but without the duct burners in operation, the HRSGs produce sufficient steam for the STG to operate at its base load output of 187 MW at average ambient conditions, yielding an overall plant gross output of approximately 517 MW. Under the same conditions but with the duct burners in service, the STG can reach its peaking output of 229 MW at average ambient conditions, yielding an overall plant gross output of approximately 560 MW (Exhibit 35, Direct Testimony of Joseph Rowley, Project Description, p. 3). Applicant testified that duct burners will be used when the electrical market will support their higher heat rate of from 9,000 to 10,000 Btus per hour (RT, p. 30).

The power plant will be located on a vacant, largely disturbed 20-acre site within a planned 186-acre industrial park in the City of Escondido in San Diego County. The industrial park, known as the Escondido Research and Technology Center (ERTC), consists of eight Planning Areas and was recently approved by the City of Escondido (RT, p. 32). The 20-acre power plant site is Planning Area 1 of the industrial park.

Sempra Energy Resources (SER) does not currently own the project site, but has site control because SER holds an option to purchase the site (RT, p. 34). The plant site is bounded on the north by an existing 49 MW power plant (CalPeak), on the east by existing industrial uses, on the south by future industrial park uses, and on the west by existing SDG&E transmission lines and future industrial park uses. The nearest residences are located approximately 1,800 feet west of the project site (Exhibit 35, Direct Testimony of Joseph Rowley, Project Description, p. 3).). An additional 44 MW peaking power plant (RAMCO) is located approximately one-half mile to the northwest of the Palomar Energy site (RT, p.33).

Grading of the ERTC industrial park will include lowering the elevation of Planning Area 1 by about 40 feet to an elevation of 750 feet above mean sea level (amsl). This grading will preserve and enhance the ridgeline along the west side of Planning Area 1, resulting in a ridgeline height of up to 82 feet above the finished pad elevation. This grading will also result in a ridgeline along the east side of Planning Area 1 that is up to 50 feet above the finished pad elevation. The excavated materials from Planning Area 1 will be used as fill in other Planning Areas of the industrial park, and also to create berms along the north and northeast sides of Planning Area 1 cresting at a uniform 20 feet above the finished pad elevation. Grading of the overall industrial park, including Planning Area 1, will be completed prior to the beginning of on-site work on the power plant facilities (Exhibit 35, Direct Testimony of Joseph Rowley, Project Description, p. 4).

Natural Gas Facilities and Transmission Facilities

The project will be fueled with natural gas delivered via the SDG&E gas system, and an existing SDG&E natural gas pipeline with sufficient capacity to serve the project is located immediately adjacent to the project site. To relieve a bottleneck in a segment of the SDG&E gas system located about one mile from the site, SDG&E will construct an upgrade consisting of approximately 2,600 feet of 16-inch pipeline. This upgrade will occur entirely within existing paved streets. (Exhibit 35, Direct Testimony of Joseph Rowley, Project Description, p. 3).

The project includes an on-site 230 kV switchyard that will connect with an existing 230 kV SDG&E transmission line located adjacent to the project site. Thus, the project requires no new transmission lines. (Exhibit 35, Direct Testimony of Joseph Rowley, p. 4).

Water Supply

Reclaimed water will be supplied to the project from the City of Escondido's Hale Avenue Resource Recovery Facility (HARRF) via a new 1.1-mile 16-inch supply

pipeline extending from an existing City of Escondido reclaimed water main. Brine from the project will be returned to the HARRF via a new 1.1-mile 8-inch brine return pipeline routed alongside the water supply pipeline and connecting to a City of Escondido brine return main. A raw water storage tank at the plant site will hold 530,000 gallons of water for plant operation (sufficient to cover a four-hour water supply service interruption), plus 200,000 gallons dedicated to the plant's fire protection water system (Exhibit 35, Direct Testimony of Joseph Rowley, Project Description, p. 4).

Construction and Operation

Project construction is expected to take 21 months, and will involve an average and peak construction work force of about 240 and 350 individuals, respectively. Construction access will be from State Highway 78 to Nordahl Road, south on Nordahl Road (which becomes Vineyard Avenue) to the future Citracado Parkway, and then south on Citracado Parkway to the project site. Temporary construction parking and laydown areas will be within the ERTC industrial park property near the power plant site. Project operation will involve a permanent work force of approximately 20 employees. Permanent access will be from the completed Citracado Parkway. (Exhibit 35, Direct Testimony of Joseph Rowley, Project Description, pp. 4-5).

Facility Closure

The planned life of the Palomar Energy Project is 30 years. Whenever the facility is closed either temporarily or permanently, the closure procedures will follow the plan provided in the Project AFC, LORS and Final Staff Assessment discussions of facility closure and the Conditions of Certification (Exhibit 1, pp. 2-55 to 2-56).

Findings and Conclusions

Based on the evidence of record, The Committee finds as follows:

1. The project involves the construction and operation of a nominal 550 MW natural gas-fired, combined-cycle power plant in the City of Escondido in San Diego County, California.
2. The project includes a 1.1-mile, 16-inch reclaimed water supply pipeline, a 1.1-mile, 8-inch brine return pipeline, and a 2,600-foot natural gas pipeline upgrade to remove a bottleneck in the SDG&E gas system about one mile from the site; no new transmission lines are required.
3. The project is adequately described in Exhibit 1, Section 2, introduced by the Applicant and in the Final Staff Assessment (Exhibit 50, Section 3; and Applicant's

PROJECT DESCRIPTION

Testimony (Exhibit 35, Direct Testimony of Joseph Rowley, Project Description; RT, pp. 28-34).).

We conclude that the Palomar Energy Project is described in sufficient detail to allow review in compliance with the provisions of both the Warren-Alquist Act and the California Environmental Quality Act (CEQA).