

2.0 Purpose and Need

2.1 Project Overview

The Southern California Gas Company (the “Proponent” or “SoCalGas”) provides reliable and efficient natural gas to approximately six million customers in Southern California. SoCalGas operates four underground storage facilities to help meet peak hourly, daily and seasonal demands for all its customers. The Aliso Canyon Gas Storage Field (the “Storage Field”) is SoCalGas’s largest underground natural gas storage field and one of the largest in the United States. The Storage Field plays a critical role in SoCalGas’s gas storage and distribution system, which generally withdraws gas from storage during the winter months and injects gas into storage during the spring and summer months. The field has 84 billion cubic feet per day (Bcfd) of working storage inventory, 1.875 Bcfd of withdrawal capacity, and current end-of-cycle injection capacity of 300 million cubic feet per day (MMcfd). Approximately 45 percent of SoCalGas’s total firm injection capacity is provided by Aliso Canyon. The majority of the injection capacity at Aliso Canyon is provided by three obsolete gas turbine driven compressors (TDCs) providing 15,000 International Organization for Standardization (ISO) HP each. These units were installed in the 1970’s and have poor efficiency due to their use of older technology.

The Proponent proposes to upgrade the existing injection system by constructing and operating a new, electrically-driven natural gas compressor station. Electrical systems that serve the Storage Field will have to be upgraded in order to accommodate the three new 22,000 horsepower (HP) motors that will drive the compressors. SoCalGas will work with Southern California Edison Company (SCE) to determine the new and modified SCE electrical infrastructure that will be required to provide electrical service to the proposed Central Compressor Station and other related facilities, which are described and analyzed in this Proponent’s Environmental Assessment (PEA).

The proposed Aliso Canyon Turbine Replacement Project (the “Proposed Project”) is required in order to meet the terms of a Settlement Agreement (SA) between SoCalGas and parties to Phase 1 of the 2009 Biennial Cost Allocation Proceeding (BCAP) in D.08-12-020. The SA requires that SoCalGas replace the TDCs and expand the overall injection capacity at the field by approximately 145 MMcfd.

The California Public Utilities Commission (CPUC) and the California Environmental Quality Act (CEQA) have established guidelines for evaluating proposed project objectives and purpose. The primary objectives and purpose are addressed in this Chapter.

2.2 Project Objectives

The primary purpose and objective of the Proposed Project is summarized by term number eight of the SA:

“SoCalGas shall make commercially reasonable efforts to replace the existing three obsolete LM-1500 turbines used to compress up to 300 MMcfd of natural gas for injection into storage at its Aliso Canyon

storage facility. Production by the manufacturer of these obsolete turbines was halted in the late 1970s and replacement parts are extremely limited. SoCalGas shall, during the replacement of the existing turbines, expand overall injection capacity at Aliso Canyon to the extent feasible by approximately 145 MMcfd. The replacement of turbines and expansion of injection capacity at Aliso Canyon shall be undertaken as soon as possible...The parties hereto agree to support expeditious approval of any CPCN application filed by SoCalGas with the Commission seeking authority to construct the storage injection facilities addressed in this paragraph.”

Southern California needs a reliable and efficient natural gas supply in order to support power generation and to serve the heating, cooling and other energy needs of industrial, commercial and residential users. The reliability and efficiency of natural gas supply is directly related to the ability to purchase gas supplies during periods of low cost/low demand and to store it for distribution during high demand/high cost periods. This dynamic allows gas suppliers and customers to avoid having to make spot market purchases at typically higher prices and to ensure gas is available at times of peak demand. In its 2007 Integrated Energy Policy Report (“2007 IEPR”), the California Energy Commission stated that the natural gas infrastructure system is critical to California’s ability to provide a stable and reliable supply of gas since only 15 percent of California’s natural gas supplies are produced in state. The 2007 IEPR further stated that “California’s natural gas storage has been instrumental to help guard against interruptions or severe weather changes, ensuring adequate supplies and making some contributions to more stable prices.”

The overall need for natural gas storage is best met through an efficient storage system. Avoiding potential interruptions in the ability to inject purchased gas (e.g., due to breakdowns of equipment such as the obsolete TDC units), and increasing the ability to rapidly inject purchased gas (e.g., through increasing the injection capacity), represent efficiencies that can produce potential benefits to the overall gas storage system.

Based on the above, the following are the Proposed Project's objectives:

1. Reduce the potential for interruptions in the ability to store gas in the Storage Field, by replacing the obsolete TDC compressor station.
2. Meet the terms of the SA between SoCalGas and parties to Phase I of the 2009 BCAP (D.08-12-020). The SA requires that SoCalGas replace the TDCs and expand the overall injection capacity at the field by approximately 145 million cubic feet per day (MMcfd) in a timely manner.
3. Convert the compression from the Storage Field from natural gas to electric.
4. Design and construct a new electric compressor station and all necessary related infrastructure to increase the injection capacity at the Storage Field by approximately 145 MMcfd.
5. Provide improved vehicle access and security to the Storage Field by constructing a new guard house; relocate and replace existing office trailers in close proximity to the current TDC station

and Storage Field facilities; preserve other on-site facilities and minimize changes to Storage Field facility where feasible and practical.

6. Ensure successful conversion to electric compression prior to decommissioning the existing TDCs to minimize the potential for gas supply service interruptions after construction of the Proposed Project.
7. Utilize recent engineering and technological advances.

These Proposed Project objectives all support the overall need for a reliable, efficient and cost-effective gas supply. The Proposed Project addresses these objectives by: 1) designing, constructing and operating a new, higher-capacity gas storage compressor station, and 2) powering the new compressor station with electricity as opposed to natural gas and incorporating technologies such as VFD into its design.