

# **Chapter 1 Purpose and Need**

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## **1.1 Purpose of the Proponent's Environmental Assessment**

Sacramento Natural Gas Storage, LLC (SNGS) is filing an application with the California Public Utilities Commission (CPUC) for a Certificate of Public Convenience and Necessity (CPCN) for the Sacramento Natural Gas Storage Project (“proposed project”). The application requests authorization to develop, construct, and operate an underground natural gas storage field in the southeastern portion of Sacramento County; the majority of the field lies within the City of Sacramento. The proposed project also includes the construction of a wellhead site, compressor station site, metering and gas conditioning equipment (to be located within Sacramento County), and approximately 2 miles of pipeline connections (see Figures 2-2 and 2-8). The application identifies the proposed project, including pipeline routing and related facility locations.

The CPUC has responsibility for approving or denying the CPCN and therefore will be the lead agency for the project under the California Environmental Quality Act (CEQA). As such, the CPUC will review the environmental impacts of the project based on this Proponent's Environmental Assessment (PEA). Although this PEA is not a formal CEQA document, it has been prepared according to CPUC regulations and in compliance with CEQA and the CEQA Guidelines.

This PEA describes the environmental impacts of converting an existing, inactive natural gas reservoir (Florin Gas Field) into a storage facility, which includes drilling up to eight wells into the reservoir (six for the injection and withdrawal of natural gas into the storage field, one water disposal well, and one monitoring well); and the construction and operation of natural gas pipelines and related facilities including a compressor station and metering equipment. The analyses of potential impacts contained in this report are based on detailed information provided by SNGS, experience from previous natural gas storage projects completed by other companies, and field surveys.

## **1.2 Purpose and Need of the Proposed Project**

In their Energy Action Plan II adopted in October 2005, the CPUC and the California Energy Commission recognized a continuing statewide need for natural gas storage projects to assist in enhancing natural gas supply reliability and mitigating natural gas price volatility. They listed among their recommendations for “KEY ACTIONS” the objective of promoting new natural gas storage projects. The proposed project responds to this continuing need, and will provide statewide benefits in expanding the existing natural gas supply infrastructure in California.

## **1.3 Organization of the PEA**

This PEA has been organized into the following sections:

**Executive Summary:** Summarizes the proposed project, its potentially significant environmental impacts and mitigation measures identified to reduce or eliminate these impacts.

**Chapter 1 Purpose and Need:** Provides an introduction and overview that describes the purpose and need for the proposed project, and the purpose of the PEA.

**Chapter 2 Project Description:** Describes the project area, project background, site selection methods, project components, construction methods, operations and maintenance program, and required permits and approvals expected for the proposed project.

**Chapter 3 Environmental Analysis:** Describes the existing conditions, evaluates the environmental impacts of the proposed project, and identifies mitigation measures, including avoidance, for the potentially significant impacts identified in this PEA.

**Chapter 4 Alternatives:** Describes alternatives to the proposed project, including alternative compressor station sites, alternative pipeline routes, and the “no project” alternative.

**Chapter 5 References:** Lists the references or personal communications relied upon in the PEA.

**Chapter 6 List of Preparers:** Lists the people who prepared the PEA.

## **1.4 Facility Overview**

### **1.4.1 Background**

Natural gas is a fossil fuel that often collects in geologically enclosed spaces, such as the permeable material covered by cap rock in the Florin Gas Field, located beneath the intersection of Power Inn Road and 53rd Avenue in the City of Sacramento. This field, like many others, is made up of layers of hard, but porous, sandstone (similar to a sponge, which soaks up and contains the gas), with a denser, impermeable layer of shale on top, which traps natural gas under the ground. Natural gas primarily consists of methane (about 85 percent), which is created by decomposing organic materials. Other components include ethane (about 7 percent), propane (about 4 percent), butane (about 2 percent), and pentane, hexane, and heptane (all less than 1 percent). As produced, natural gas also can be associated with other gases such as water vapor, carbon dioxide, oxygen, and nitrogen.

After natural gas is extracted from the ground and treated, it can be transported through a network of intrastate and interstate gas pipelines that can deliver the gas across wide distances. Because of changes in the natural gas industry over the past several years, many private companies no longer purchase natural gas services from only one company. Instead, many California companies arrange to purchase gas directly from producers across the western half of North America and then contract with the pipeline owners to transport the gas to the end point in California.<sup>1</sup>

Pipeline capacity into California has increased over the last 15 years, but demand has risen as well—mostly because of population growth and electric power plants switching from oil to natural gas to fuel their boilers and reduce air pollutant emissions. On occasion, especially during extreme weather, the pipeline companies cannot get enough gas into their systems to meet demand. Pressure in the pipe

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<sup>1</sup> California Public Utilities Commission website, “Natural Gas and California,” accessed February 15, 2007.

begins to drop, and the pipeline companies are forced to cut off supplies, first to “interruptible” or “non-firm” customers and then to “firm” customers as a last resort.

The state’s two largest natural gas utilities, Pacific Gas and Electric (PG&E) and Southern California Gas Company (SCGC), for years have stored natural gas in various storage facilities around the state as a method of alleviating the effects of a supply shortage. Other private companies now are also allowed to build such facilities and compete directly with PG&E and SCGC in offering natural gas services, including storage services. Increasing the total amount of natural gas storage capacity within California will help reduce the negative effects of supply curtailments and also will allow natural gas users to buy gas when it is plentiful and inexpensive, inject it into a storage facility, and then withdraw it later when gas prices are relatively higher. Potential customers for such services include owners of gas-fired electric power plants, government, industries, and businesses, and groups of schools that pool their gas purchasing power.

#### **1.4.2 Related Storage Facilities**

Three types of natural gas storage facilities are currently in use in the United States: abandoned salt caverns, water aquifers, and old production fields. In California, only old production fields are currently used as storage facilities. An old, pressurized production field is considered the most desirable by storage facility developers for several reasons: because the field was already used for gas production, the geology of the reservoir is generally well-known, and the cap rock covering the permeable basin holds natural gas in very well, while water below keeps it pressurized for easier withdrawal.<sup>2</sup>

Currently, there are two companies, (other than PG&E and SCGC) that own natural gas storage facilities in California – Lodi Gas Storage, LLC and Wild Goose Storage, Inc. Lodi Gas Storage operates the Lodi Gas Storage Facility, located northeast of the City of Lodi in San Joaquin County, and the Kirby Hills Facility, located in Solano County. Wild Goose Storage, Inc. (WGS) began operations at its facility in Butte County in the late 1990s; in 2002, WGS obtained authorization by the CPUC to expand its permitted storage and operational capacity.

#### **1.4.3 Sacramento Natural Gas Storage Application**

In its application to the CPUC, SNGS is requesting authorization to construct and operate a new natural gas storage facility at the Florin Gas Field. SNGS intends to offer its customers the ability to inject and/or withdraw gas into and out of the Florin Gas Field up to several times a day. SNGS customers, other than the Sacramento Municipal Utility District (SMUD), would make their own arrangements for purchasing the gas, for transporting it to and through PG&E’s natural gas pipeline system for delivery to the storage facility, and for delivery from the storage facility to the customer. SMUD would make its own gas transportation arrangements as well, using its transmission pipelines.

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<sup>2</sup> NaturalGas.org website “Storage of Natural Gas” <http://www.naturalgas.org/naturalgas/storage.asp#depleted>. Accessed on February 15, 2007.

In response to the application, the CPUC must decide whether to issue a CPCN to SNGS, authorizing it to construct and operate the proposed project. The CPUC conducts two parallel processes when considering any application for a CPCN: an application process that considers whether the facility would be in the public interest, in accordance with factors set forth in the California Public Utilities Code, and an environmental review process under CEQA.

CEQA requires all government agencies in California to assess potential impacts on the environment whenever they make a discretionary decision. As lead agency, the CPUC must determine whether the proposed project will result in potentially significant impacts on the environment and whether those potential impacts can be avoided, eliminated, compensated for, or reduced to less-than-significant levels. This PEA, along with other information collected by the CPUC, will form the basis of the CEQA document prepared by the CPUC. The CEQA document will become part of a body of evidence that the CPUC will use in deciding whether or not to approve the application.