

## Introduction

### Purpose of the Proponent's Environmental Assessment

Lodi Gas Storage, LLC is filing an application with the California Public Utilities Commission (CPUC) for a Certificate of Public Convenience and Necessity (CPCN) for the Kirby Hills Natural Gas Storage Project. The application requests authorization to develop, construct, and operate an underground natural gas storage facility approximately 7 miles southeast of the City of Fairfield in Solano County (Figure 1-1). The proposed project also includes construction and operation of a 5.9-mile pipeline from the Kirby Hills storage field to interconnect with the Pacific Gas and Electric Company's (PG&E's) Line 400 gas pipeline in Solano County. The application identifies the proposed project, including pipeline routing and related facility locations.

The CPUC has principal responsibility for approving or denying the CPCN and therefore will be the lead agency in preparing a California Environmental Quality Act (CEQA) document for the project based on this PEA. Although this PEA is not a formal CEQA document, it was prepared according to CPUC regulations and in compliance with CEQA and the State CEQA Guidelines.

The PEA describes the environmental impacts of converting an existing natural gas reservoir into a storage facility, which includes drilling several wells into the reservoir for injection, withdrawal, and observation; and construction and operation of a natural gas pipeline and related facilities, including a natural gas-fueled compression station, which would move gas between PG&E's pipeline system and the storage facility. The impact analyses in this report are based on agency consultation, discussions with land owners, detailed information provided by Lodi Gas Storage on each component of the proposed project, experience from previous gas storage projects completed by other companies, and field surveys.

# Organization of the PEA

This PEA has been organized into the following sections:

**Executive Summary:** Summarizes the environmental impacts of the proposed project and mitigation measures identified to reduce or eliminate significant impacts, and summarizes alternatives to the proposed project.

**Chapter 1. Introduction.** Provides an introduction and overview that describes the proposed project and the purpose of the PEA, and summarizes the PEA process.

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

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

**Chapter 4. Citations.** Lists the references or personal communications cited in the various resource sections.

**Chapter 5. List of Preparers.** Lists the people who prepared the report.

**Acronyms and Abbreviations.** Defines acronyms and abbreviations used in this PEA, particularly those associated with the natural gas storage, transmission, and distribution processes and their regulation.

**Glossary.** Defines terms used in this PEA, particularly those associated with the natural gas storage, transmission, and distribution processes and their regulation.

**Appendices.** Includes background technical material and required landowner information.

## Facility Overview

### Background

Natural gas is a naturally occurring accumulation of gases in geologically enclosed spaces, such as the permeable material covered by cap rock in the field beneath Kirby Hill. It primarily consists of methane (about 85 percent), which is created by decomposing organic materials. Other components are ethane (about 7 percent); propane (about 4 percent); butane (about 2 percent); and pentane,



hexane, and heptane (all less than 1 percent). When it first comes out of the ground, natural gas also can contain liquid hydrocarbons, water, and contaminants, such as hydrogen sulfide, which must be removed prior to transportation.

After natural gas is extracted from the ground and treated, it is pumped into a network of intrastate and interstate gas pipelines that can deliver the gas across wide distances, such as from the mountains of British Columbia in Canada to Southern California. Because of changes in the natural gas industry over the past several years, many private companies no longer deal with only one company when purchasing natural gas services. Instead, many California companies arrange to purchase gas directly from producers across the western half of North America and then contract with PG&E and other pipeline owners to transport the gas to the end point in California.

Pipeline capacity into California has more than tripled in 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 cold spells, the pipeline companies cannot get enough gas into their systems to meet demand. Pressure in the pipe 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 only as a last resort. This situation occurred in Winter 1998–99 for more than 10 days, forcing most fossil-fueled plants in the state to switch to fuel oil in order to fire the boilers, which produce substantially greater air emissions.

The state’s two largest natural gas utilities, PG&E and Southern California Gas Company, 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, non-utility companies now are also allowed to build such facilities and compete directly with PG&E and Southern California Gas Company in offering natural gas services, including storage services, providing they meet all applicable laws and regulations. Increasing the total amount of natural gas storage capacity within California will help to 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 might include owners of gas-fired electric power plants, industries and businesses, and groups of schools that pool their gas purchasing power.

## Related Storage Facilities

Three types of 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; the cap rock

covering the permeable basin holds natural gas in very well, while water below keeps it pressurized for easier withdrawal.

Lodi Gas Storage has successfully operated the Lodi Gas Storage Facility, located northeast of the City of Lodi in San Joaquin County, for several years. The existing Lodi facility is of substantially greater magnitude than the proposed facility. There have been no major problems with the Lodi Gas Storage Facility during its operation, and the experiences from that project will be brought to the Kirby Hills Gas Storage Facility.

Currently, besides Lodi Gas Storage, only one other company (other than PG&E and Southern California Gas Company) owns a natural gas storage facility in the state of California. That company, Wild Goose Storage, Inc., began operations at its facility in Butte County in the late 1990s. The Wild Goose Storage facility is similar to that proposed by Lodi Gas Storage, except that it does not offer the capability of injecting and withdrawing gas several times per day. Instead, the Wild Goose Storage facility was designed more for long-term storage.

## Lodi Gas Storage Application

In its application to the CPUC, Lodi Gas Storage is requesting authorization to construct and operate a new natural gas storage facility in the Kirby Hills. Lodi Gas Storage intends to offer its customers the ability to inject and/or withdraw gas into and out of the Kirby Hills Facility up to several times a day. Lodi Gas Storage customers 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.

In response to the application, the CPUC must decide whether to issue a CPCN to Lodi Gas Storage, authorizing it to construct and operate the new facility. The CPUC conducts two parallel processes when considering any application for a CPCN: an application process similar to a court proceeding that considers whether the facility would be in the public interest, 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 Lodi Gas Storage Kirby Hills Facility would result in significant impacts on the environment and whether those impacts could be avoided, eliminated, compensated for, or reduced to less-than-significant levels. This PEA, along with other information collected and requested 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 Commission will use in deciding whether or not to approve the application.

## CPUC Application Process

The CPUC's application process focuses on public interest issues and examines whether the project meets CPUC criteria for approval. An Assigned Commissioner and an Administrative Law Judge supervise the process, which resembles a court proceeding. Although the Commission's Natural Gas Policy Statement (R.98-01-011) and related prior orders favor development of gas storage facilities by nonutility companies, approval of such applications is by no means automatic. During the application process, Lodi Gas Storage must show that the facility is in the public interest. The proceeding includes the following steps:

**Application.** Lodi Gas Storage submitted an application to the CPUC in July 2005 for a CPCN to construct and operate the gas storage facility and pipeline.

**Prehearing Conference.** At the prehearing conference, the Assigned Commissioner and the Administrative Law Judge may hear comments from interested parties about the public interest, environmental issues to be considered, and the schedule for reviewing the application. At the hearing, members of the public can file appearance forms to become parties and participate in the formal proceeding.

**Scoping Memo.** Following the prehearing conference, the Administrative Law Judge prepares a scoping memo that identifies the issues to be considered, including whether or not there is a need for evidentiary hearing, and sets forth the schedule for the rest of the proceeding.

The hearings may be waived in the scoping memo. The following discussions regarding hearings and public meetings are required only if evidentiary hearings are not waived.

—**Testimony Exchanged.** Before the evidentiary hearings, participating parties may submit written testimony to all other parties on the issues the Commission is considering.

—**Evidentiary Hearings.** During evidentiary hearings, parties may present information through direct testimony and exhibits. The Commission must decide public interest issues based on the evidence from the written testimony, evidentiary hearings, and public participation hearing. Only people who officially become parties to the case may participate in the evidentiary hearings.

—**Public Participation Hearing.** The Assigned Commissioner and the Administrative Law Judge may hold a public participation hearing in the project area to give members of the public another opportunity to provide the CPUC with their opinions and concerns on the proposed project. This hearing will be held during the public comment period on the CEQA document. Anyone may participate in the public participation hearing. The public may comment on both the general proceeding and the environmental review during the public participation hearing.

**Commission Decision.** Following the completion of all required hearings and the entire CEQA process, the Administrative Law Judge will issue a proposed decision on the Lodi Gas Storage application, which will circulate for 30 days—giving all parties to the proceeding the opportunity to comment on the proposed decision. After that, based on the CEQA document and all the evidence gathered by the CPUC, Commissioners will vote on whether to approve the project. A Commissioner may reject the Administrative Law Judge’s proposed decision and issue an alternate decision, which would also be considered by the full Commission. In accordance with Rule 77.6 of the CPUC’s Rules of Practices and Procedure, alternate decisions also must be circulated for comment before the Commissioners vote on it. Commissioners can vote to approve the project or to disapprove the project, either with or without prejudice. The view of the majority of Commissioners prevails. Disapproval with prejudice indicates that the Commissioners reject the application based on its merits, meaning that the project would not be in the public interest or would result in unacceptable impacts on the environment. Disapproval without prejudice means that the project is rejected for another reason, such as because the application was incomplete, and the Applicant can reapply to the Commission once the discrepancy is addressed.

**Rehearing and Judicial Review.** Once the Commission has issued a decision on a project, parties have 30 days from issuance of a decision to file for a rehearing of the case by the CPUC. (The mere filing of a rehearing request does not excuse compliance with the original order or decision.) According to Rules 1756, 85, and 86 of the Commission’s Rules of Practices and Procedure and California Public Utilities Code Section 1731, if the rehearing request is denied or if parties are not satisfied with the rehearing ruling, the CPUC’s decision can be appealed either to the California Supreme Court or State Court of Appeal in the district in which the appealing party resides. The filing party can be the complainant, defendant, respondent, or any intervenor in the case.