CHAPTER 1. INTRODUCTION

1.1 PURPOSE OF THE EIR

In November 1998, Lodi Gas Storage, LLC (LGS) filed an application (Application 98-11-012) with the California Public Utilities Commission (CPUC) for a Certificate of Public Convenience and Necessity. The application requested authorization to develop, construct, and operate an underground natural gas storage facility approximately 5.4 miles northeast of the City of Lodi in San Joaquin County. The proposed project also includes construction and operation of a 33-mile pipeline from the storage field to interconnect first with the Pacific Gas and Electric Company's (PG&E's) Line 196 gas pipeline in San Joaquin County and terminate at the PG&E Line 401 pipeline at Sherman Island in Sacramento County.

The application identified the Applicant's proposed project, including pipeline routing and related facility locations. The original application was subsequently modified by three formally submitted amendments that identified several project variations and alternate facility locations for the pipeline route and the proposed compressor facility but that did not formally change the Applicant's proposed project. The information and alternate facility locations included in the original application and amendments were fully considered during the preparation of this draft environmental impact report (EIR).

For the purposes of evaluating the project under the California Environmental Quality Act (CEQA) guidelines, the "proposed project" as identified in this EIR is the project formally presented in LGS's application, as modified by three amendments. During preparation of the draft EIR, CPUC developed three alternatives to the original project proposal for evaluation in this EIR, all of which are technically feasible and generally acceptable to LGS. Based on the CPUC's review of the analysis of the original proposed project and project alternatives, CPUC has determined that the Composite Route Alternative is the preferred alternative. LGS submitted information on August 16, 1999, indicating that the Composite Route Alternative is also LGS's preferred route and includes the Applicant's preferred compressor location.

As required by CEQA, as amended, this EIR examines the expected individual and cumulative impacts of the proposed project. This EIR also identifies means to minimize potential adverse impacts (mitigation measures) and evaluates reasonable alternatives to the proposed project, including the No-Project Alternative. The CPUC has principal responsibility for approving or denying the Certificate of Public Convenience and Necessity and therefore is the lead agency in preparing this EIR.

The CPUC has prepared this Draft EIR to provide the public and responsible agencies reviewing this project with information about the potential effects on the local and regional environment. This EIR was prepared in compliance with CEQA and the State CEQA Guidelines.

The EIR 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 the construction and operation of a 33-mile 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; a gas drying facility, which would remove water from the gas after it is withdrawn; and water injection pumps and wells, which would be used to reinject the water into the storage facility. The impact analyses in this report are based on agency consultation, public scoping, detailed information provided by LGS on each component of the proposed project, experience from previous gas storage projects completed by other companies, and field surveys.

1.2 PROJECT OVERVIEW

1.2.1 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 fields near Lodi. 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, it 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 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 recent changes in the natural gas industry, many private companies no longer deal with only one company when purchasing natural gas services. Instead, many California companies are arranging to purchase gas directly from producers across the western half of North America and then contracting 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 "firm" customers only as a last resort. This situation occurred in the winter of 1998-1999 for more than 10 days, forcing most fossil-fueled plants in the state to switch to fuel oil 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 are now 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 reduce the negative effects of supply

curtailments and will also 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.

1.2.2 RELATED STORAGE PROJECTS

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: the field was already used for gas production, so 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.

Currently, 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., recently began operations at its facility in Butte County. The Wild Goose Storage facility is similar to that proposed by LGS, 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.

1.2.3 LGS APPLICATION FOR CPCN

In its application to the CPUC, LGS is requesting authorization to construct and operate a new natural gas storage facility. LGS intends to offer its customers the ability to inject and/or withdraw gas into and out of the Lodi facility up to several times a day. LGS's storage customers would make their own arrangements for purchasing the gas, and 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 LGS application, the CPUC must decide whether to issue a Certificate of Public Convenience and Necessity (CPCN) to LGS 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 project is needed and would be in the public interest; and an environmental review process under CEQA. See Section 1.5, "EIR Process," and Section 1.6, "CPUC Application Process," for a full description of the two processes.

CEQA requires all government agencies in California to assess potential impacts to the environment whenever they make a discretionary decision. As lead agency, the CPUC must determine if the LGS project would result in significant impacts to the environment, and whether those impacts could be avoided, eliminated, compensated for or reduced to less-than-significant levels. This EIR will become part of a body of evidence that the Commission will use in deciding whether or not to approve the LGS application.

1.3 KEY AREAS OF ENVIRONMENTAL CONCERN

This EIR analyzes all potential environmental impacts of the proposed project and project alternatives. LGS's Proponent's Environmental Assessment (PEA) and the public and agency scoping process for the EIR identified key areas of environmental concern. These environmental concerns are examined in the EIR, though the analysis of any one issue is often divided up into different resource areas as defined by CEQA. For example, many people attending public meetings held to take comment on the scope of the EIR stated they were concerned about the project's potential to harm the "rural character" of the area. These rural character issues are examined in Section 3.12, "Visual Resources," which concentrates on visual impacts of the project, and Section 3.1, "Land Use Planning and Agricultural Resources." Section 3.10, "Noise," analyzes whether the project would create significant noise impacts on people who live, work, or attend school in the project area. Therefore, in reviewing the impacts of complex issues, it may be necessary to review multiple technical sections of this EIR. Key areas of environmental concern are summarized in the following sections.

1.3.1 SAFETY

Because natural gas is explosive in certain conditions, safety is important in the design and construction of any facility that handles or stores natural gas. This EIR examines the potential for a fire or catastrophic explosion resulting from facility operation, including during a major earthquake, and analyzes the systems and procedures proposed by LGS to ensure the safety of the project. The safety analysis relies heavily on guidelines developed by the U.S. Department of Transportation's Office of Pipeline Safety (OPS), which is the agency primarily charged with regulating safety of natural gas pipeline facilities. The safety analysis is based on the assumption that the project will be constructed and operated in accordance with OPS regulations. OPS regulations govern where a pipeline can be placed, the design features of the pipeline, how deep it must be buried, and how often and thoroughly it must be inspected.

1.3.2 AGRICULTURAL IMPACTS

LGS proposes to drill several wells into the underground gas reservoir northeast of Lodi and to construct a pipeline to connect the wells to PG&E's pipeline system. Both the wells and the pipeline would be located almost exclusively on or adjacent to land currently used for agricultural purposes. The EIR examines the potential impact the project would have on agricultural resources and operations in the region, and identifies measures to reduce impacts to agricultural land, such as burying the pipeline deeper than normal in some areas where certain agricultural practices are used. This EIR considers both the short-term and long-term impacts to agricultural lands resulting from project construction and operation.

1.3.3 RURAL CHARACTER

Because the project would be located on rural lands in the Central Valley and Sacramento-San Joaquin River Delta (the Delta), the EIR examines potential impacts of the project on rural aesthetics and

character, and identifies measures for reducing or eliminating any visual or noise impacts. Key issues analyzed include whether constructed facilities are visually compatible with the surrounding landscape, whether any scenic view is affected by construction of the proposed facilities, and whether the project would result in noise impacts on people living, working, or attending school near the facilities. This EIR also examines the consistency of the project with the applicable policies of the San Joaquin County General Plan, the Sacramento County General Plan, and other regionally adopted plans.

1.3.4 LEVEE STABILITY

The pipeline would cross under several major waterways, all of which are kept in their channels by levees, before terminating at Sherman Island in the Delta. Because much of the surrounding land would be inundated in the event of a levee failure, the stability of the levee during and after pipeline placement is analyzed. This EIR examines potential impacts from the directional drilling process proposed by LGS to route the pipeline under the waterways.

1.3.5 WATER QUALITY

This EIR examines the potential for groundwater contamination from drilling activities, including contamination from drilling fluids and cross-connection of water tables. Cross-connection occurs when drilling opens a pathway between two separate sources of groundwater. Well drilling procedures to prevent groundwater contamination are closely monitored by California Division of Oil, Gas and Geothermal Resources. The EIR also examines surface water contamination that could occur wherever the project encounters waterways, including boring under rivers, canals, and ditches. In examining the potential for water quality effects, the EIR relies on the rules, regulations and guidelines developed by the California State Water Resources Control Board and the Regional Water Quality Control Board, and assumes that the project would be constructed and operated consistent with the requirements of these agencies. The EIR also identifies measures to reduce the risk of water quality degradation, including monitoring for potential contamination during project construction and operation.

1.3.6 GEOLOGY

This EIR analyzes the potential effect of seismic and other geologic hazards on the proposed project and project alternatives. The EIR considers the potential for destruction of unique paleontologic resources. The EIR also examines soils in the project area and discusses potential for erosion and loss of top soil caused by construction and operation of the project. The EIR also identifies measures to reduce or eliminate significant impacts.

1.3.7 WETLANDS, WILDLIFE, AND HABITAT

Section 3.7, “Biological Resources,” examines potential impacts on wetlands, plants, wildlife, and habitats, including seasonal wetlands, vernal pools, and riparian areas. This EIR also identifies measures

to avoid, minimize, or reduce impacts on biological resources to less-than-significant levels. The EIR analyzes potential impacts on fish and wildlife, including species designated as listed and sensitive under the state and federal Endangered Species Acts (including greater sandhill crane, Swainson's hawk, and giant garter snake), and the corridors, nesting areas, and habitats used by wildlife in the vicinity of the proposed project. The EIR also examines seasonal issues, such as when to avoid construction to protect nesting birds during their mating season.

1.3.8 AIR QUALITY

Both the U.S. Environmental Protection Agency and the California Air Resources Board have designated the San Joaquin Valley as a nonattainment area (i.e., an area that does not meet the relevant federal or state air quality standard) for ozone and PM10. This EIR identifies both stationary and mobile sources of emissions resulting from the project, such as the natural gas-fueled compressors used for moving gas through project facilities, and identifies mitigation measures to reduce or eliminate those impacts.

1.4 ORGANIZATION OF THE EIR

The EIR for the proposed LGS gas storage facility consists of the Draft EIR, which contains the environmental analysis of the proposed project and project alternatives, and the Final EIR, which will contain comments received during the public review period and the responses to those comments. This Draft EIR 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, as well as summarizing alternatives to the proposed project.

Chapter 1. Introduction: Provides an introduction and overview that describes the proposed project and the purpose of the EIR, summarizes the EIR review and certification process, and identifies key areas of environmental concern.

Chapter 2. Project and Alternatives Description: Presents the project objectives, provides a detailed description of the proposed project, including facilities and construction methods, and discusses the alternatives considered by the CPUC during the environmental review process.

Chapter 3. Environmental Setting, Impacts, and Mitigation: Describes existing conditions, evaluates the environmental impacts of the proposed project and project alternatives, and identifies mitigation measures for the impacts identified in this EIR.

Chapter 4. Cumulative and Growth-Inducing Impacts: Evaluates cumulative and growth-inducing impacts resulting from implementation of the project, together with reasonably anticipated future projects that may have related or cumulative impacts.

Chapter 5. Draft Mitigation Monitoring and Reporting Plan: Presents a mitigation monitoring and reporting framework for the mitigation measures proposed by the Applicant and mitigation measures recommended by the CPUC for the Composite Route Alternative.

Chapter 6. Report Preparation: Lists people who prepared the report, identifies public agencies that were consulted, and describes public involvement in the EIR process.

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

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

Appendices: Includes the Notice of Preparation (NOP) for this EIR, a key issue summary, and background technical material.

1.5 EIR PROCESS

1.5.1 NOTICE OF PREPARATION

In accordance with State CEQA Guidelines Section 15082, the CPUC prepared an NOP for this EIR (see Appendix A), which was mailed on February 17, 1999, to local, state, and federal agencies and the State Clearinghouse for a 30-day review period. The NOP provided a general description of the proposed project and a summary of the main regulations and permit conditions applicable to its development and operation. Responses from these agencies helped to determine relevant environmental issues associated with the project that are addressed and analyzed in this EIR.

1.5.2 PUBLIC AGENCY PARTICIPATION PROGRAM

To gather information related to the possible environmental effects of this application, the CPUC consulted with other affected agencies and jurisdictions. The CPUC's Public Agency Outreach Program was developed to establish early contact and open lines of communication with key public agencies that would be directly affected by the project proposed by LGS in Application 98-11-012, and to obtain insight and information for this EIR.

The outreach program included consultations with more than 25 public agencies conducted at central meeting locations, in agency offices, and by telephone. Local agency representatives provided background information on the local setting, permitting requirements, regulatory requirements, land use information, community perceptions, and local environmental concerns. Chapter 5, "Report Preparation," presents a schedule of meetings held as part of the Public Agency Outreach Program.

1.5.3 PUBLIC SCOPING

The CPUC conducted two public scoping meetings to explain the environmental review process and to receive public comments on the scope of the EIR. These meetings were conducted in two locations convenient to residents who live in the areas where LGS proposes to develop facilities. The CPUC sent a notice of the public meetings to more than 650 potentially interested parties, including residents and homeowners within a 0.25-mile radius of the project areas, special interest groups, and local, regional, and state governmental office holders and agencies. Advertisements announcing the public meetings were placed in papers in the geographic area of the proposed project. Chapter 5, "Report Preparation," provides a more detailed description of the CPUC's public involvement efforts.

1.5.4 DRAFT EIR

This document is the Draft EIR for the CPUC's Application 98-11-012, the LGS project. It contains a description of the project, alternatives, description of the environmental setting, identification of direct and cumulative impacts and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives.

1.5.5 FINAL EIR CERTIFICATION

Written and oral comments received in response to the Draft EIR will be addressed in a response-to-comments document that, together with the Draft EIR, will constitute the Final EIR. The Final EIR will be released for public review. A proposed decision on the application will be drafted and released for public comment subsequent to the potential certification of the Final EIR.

1.5.6 MITIGATION MONITORING AND REPORTING PROGRAM

CEQA requires lead agencies to "adopt a reporting and mitigation monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment." A final reporting and monitoring program is not required to be included in the EIR. Throughout the EIR, however, mitigation measures have been clearly identified and presented in language that will facilitate establishment of a monitoring program. In addition, a draft Mitigation Monitoring and Reporting Plan is included in the Executive Summary in Table ES-3. Any measures adopted by the CPUC as conditions for approval of the project will be included in a Mitigation Monitoring and Reporting Program, which will be completed following publication of the Final EIR, to ensure compliance with the adopted mitigation measures.

1.6 CPUC APPLICATION PROCESS

The CPUC's application process focuses on utility ratepayer and public benefit 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. LGS must show, during the application process, that the project would clearly provide public benefit. The proceeding includes the following steps:

1. **Application.** The project proponent, LGS, submitted an Application to the CPUC on November 5, 1998, for permission to construct and operate the gas storage facility and pipeline.

2. **Prehearing Conference.** At the prehearing conference on February 11, 1999, the Assigned Commissioner and the Administrative Law Judge heard comments from interested parties about the economic issues to be considered and the schedule for reviewing the application. At the hearing, members of the public could file appearance forms to become parties and participate in the formal proceeding.

3. **Scoping Memos.** Following the prehearing conference, the Administrative Law Judge prepared a scoping memo (dated March 3, 1999) that identified the issues to be considered and set forth the schedule for the rest of the proceeding. A second scoping memo (dated May 4, 1999) modified the schedule for the proceedings to accommodate the receipt of supplemental testimony by the Applicant regarding certain interconnect issues.

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

5. **Evidentiary Hearings.** During evidentiary hearings in June 1999, parties presented information through direct testimony and exhibits. The Commission must decide the ratepayer and public benefit 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 hearing.

6. **Public Participation Hearings.** The Assigned Commissioner and the Administrative Law Judge will 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 Draft EIR. Anyone may participate in the public participation hearings. The public may comment on both the general proceeding and the environmental review during the public participation hearing.

7. **Ruling.** Following the completion of all required hearings and the entire EIR process, the Administrative Law Judge will issue a proposed decision on LGS's 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 EIR 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 must also 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 means 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.

8. **Rehearing.** Once the Commissioners have ruled on a project, parties generally have 30 days 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 8.2, 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 case can be appealed to the 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.