

1.0 INTRODUCTION

On October 28, 2005, Gulf LNG Energy, LLC and Gulf LNG Pipeline, LLC filed applications with the Federal Energy Regulatory Commission (FERC or Commission) under sections 3(a) and 7(c) of the Natural Gas Act (NGA), respectively. The applications were noticed in the Federal Register on November 15, 2005. In Docket No. CP06-12-000, Gulf LNG Energy, LLC seeks authorization to site, construct, and operate a liquefied natural gas (LNG) import terminal near Pascagoula, Mississippi. In Docket Nos. CP06-13-000 and CP06-14-000, Gulf LNG Pipeline, LLC seeks a Certificate of Public Convenience and Necessity (Certificate) to site, construct, and operate a new natural gas pipeline and ancillary facilities to connect the proposed LNG terminal to existing interstate pipeline systems operated by Destin Pipeline Company, LLC (Destin) and Gulfstream Natural Gas System LLC (Gulfstream), and a BP gas processing facility. Hereafter, Gulf LNG Energy, LLC and Gulf LNG Pipeline, LLC are referred to collectively as Gulf LNG. The project, including the LNG terminal and natural gas pipeline components, is referred to as the LNG Clean Energy Project.

Gulf LNG's proposed facilities would transport up to 1.5 billion cubic feet per day (Bcfd) of imported natural gas to the United States market. In order to provide LNG import, storage, and pipeline transportation services, Gulf LNG requests Commission authorization to construct, install, and operate an LNG terminal and natural gas pipeline facilities.

The LNG terminal facilities would include:

- a ship berth and unloading facilities (i.e., marine facilities) capable of accommodating one LNG ship;
- LNG transfer systems;
- two 160,000-cubic meter (m³) full containment LNG storage tanks;
- 10 high-pressure submerged combustion vaporizers (SCV);
- vapor handling systems; and
- hazard detection and response equipment, ancillary utilities, buildings, and service facilities.

The natural gas pipeline facilities would include:

- a 5.0-mile-long, 36-inch-diameter natural gas sendout pipeline; and
- associated pipeline support facilities, including three interconnects/meter stations, one pig launcher, and one pig receiver.

In addition to the LNG terminal and natural gas pipeline facilities, the LNG Clean Energy Project would require construction of facilities that do not fall under the Commission's jurisdiction. These include electric transmission facilities and a water supply pipeline.

The vertical line in the margin identifies text that has been modified in the final EIS and differs from the corresponding text in the draft EIS.

1.1 PROJECT PURPOSE AND NEED

The general purpose of the LNG Clean Energy Project is to provide a new, long-term, and timely source of natural gas to markets in the United States. Gulf LNG believes that the purpose of the project can best be achieved by satisfying the following specific objectives:

- constructing and operating marine facilities capable of berthing one LNG ship with cargo capacities of up to 250,000 m³;
- constructing and operating LNG storage facilities with a combined capacity of 320,000 m³ to accommodate the logistics of intermittent ship arrivals and allow for rapid response to fluctuating demands for natural gas;
- constructing and operating LNG vaporization facilities and a natural gas pipeline capable of delivering up to 1.5 Bcfd of natural gas to national markets;
- ensuring that LNG ships can reach the facility, which requires a Letter of Recommendation (LOR) from the Coast Guard determining the suitability of the waterway for LNG marine traffic;
- utilizing existing interstate natural gas pipeline infrastructure with access to third-party gas processing and underground gas storage in order to add flexibility in natural gas management;
- using proven onshore LNG terminal technology that can safely manage large quantities of LNG, thus accommodating variations in ship arrivals due to weather or natural gas demand;
- providing geographic diversity in the location of LNG terminals along the Gulf Coast to increase reliability of natural gas supplies;
- constructing and operating the LNG terminal on lands designated for water-dependent industrial development in an area where the local community would economically benefit; and
- developing a site that would have minimal negative environmental and community impacts.

The objective of utilizing existing interstate natural gas pipeline infrastructure would be accomplished through interconnections with the Destin and Gulfstream pipeline systems. The interconnect with the Gulfstream pipeline would provide access to the Florida market, which is one of the largest growth markets for natural gas in the United States. The interconnect with the Destin pipeline would provide access to six major pipelines that transport gas to major markets in the Southeast, Mid-Atlantic, and Northeast. Additionally, the Destin pipeline would allow access to underground storage, which provides flexibility to manage daily and monthly imbalances between market demand and supply and provides critical capacity for backup in the unlikely event of a supply interruption from the project. Furthermore, the Destin pipeline interconnection would provide the opportunity for backhaul capacity, which creates its own capacity, to major markets throughout the United States via the interstate pipeline grid.

Depending on the composition of a given shipment of LNG, the sendout natural gas from the LNG terminal could require processing to remove certain components. Gulf LNG would establish an interconnection with the BP gas processing facility to provide the flexibility for gas processing, if needed. The pipes and valves would be configured so that either processed or unprocessed gas could be provided to both the Destin and Gulfstream pipelines.

Energy demand in the United States has been growing and continues to increase steadily (Energy Information Administration (EIA), 2005). The U.S. Department of Energy (DOE), EIA's *Annual Energy Outlook 2005* estimates that total energy consumption in the United States will increase from 98.2 quadrillion British thermal units (Btu) per year in 2003 to 133.2 quadrillion Btu per year in 2025. This represents an annualized (i.e., year to year) increase of 1.4 percent. Although this energy will be obtained from a variety of sources (e.g., coal, petroleum, hydropower), use of natural gas is expected to grow to a point where it will represent about 25 percent of all energy consumption. Specifically, the EIA anticipates that consumption of natural gas in the United States will grow from approximately 22 trillion cubic feet (Tcf) per year in 2003 to almost 31 Tcf per year in 2025, representing a total increase of almost 41 percent, or an annualized increase of 1.5 percent. This growth is driven by large increases in demand for industrial applications and electrical generation. This sector is expected to account for 57 percent of the increase in natural gas demand by 2020.

The natural gas supply in the United States currently comes from three basic sources: domestic production, imports from Canada, and LNG imports. Domestic onshore production in the lower 48 states is grouped into six supply regions, which in 2003 ranked from highest to lowest in volume as follows: Gulf Coast, Rocky Mountain, Southwest, Midcontinent, Northeast, and West Coast (EIA, 2005). Projecting to 2025, production in the Rocky Mountain region is expected to increase from 27 percent of the lower 48 onshore production (in 2003) to 38 percent. This increase is primarily from unconventional sources such as tight sands, shale, and coalbed methane. The Gulf Coast and Midcontinent regions are projected to decrease in production, and the other regions will increase slightly or remain steady. By 2025, the ranking of the lower 48 states regions relative to production would be: Rocky Mountain, Gulf Coast, Southwest, Midcontinent, Northeast, and West Coast. Offshore natural gas production in the lower 48 states is projected to decrease. Alaska production will decline slightly through 2016, at which time it will begin to increase as the North Slope Alaska natural gas pipeline is projected to begin operation. By 2025, Alaska is projected to produce 2.2 Tcf of natural gas compared to 0.4 Tcf in 2003 (EIA, 2005).

Although total domestic production is projected to increase, it will not keep pace with increasing demand. Domestic natural gas production is expected to account for 34 percent of the total growth in the natural gas supply, and net imports are projected to account for the remaining 66 percent (EIA, 2005). Natural gas imported from Canada has historically been and will continue to be an important source of natural gas. According to the Canadian National Energy Board (CNEB), Canadian exports to the United States increased by a factor of four between 1986 and 1999 (CNEB, 2004). However, the CNEB report also states that "production from the Western Canada Sedimentary Basin has flattened out ... despite record levels of drilling activity." In the short term, deliverability from the Western Canada Sedimentary Basin is expected to decrease and the CNEB acknowledges that it "will be a challenge to increase production from conventional sources in Canada." Furthermore, Canada is expected to consume an increasingly larger portion of the natural gas it produces. The EIA (2005) predicts that net imports of Canadian natural gas will peak at 3.0 Tcf in 2005 and, thereafter, will show an overall decrease to a low of 2.6 Tcf in 2025. For these reasons, LNG imports will become increasingly important sources of natural gas for the United States.

LNG is natural gas that has been cooled to about -260 degrees Fahrenheit (°F) for efficient shipment and storage as a liquid. LNG is more compact than the gaseous equivalent, with a volumetric difference of about 610 to 1. LNG can be transported long distances across oceans using specially

designed ships, thus allowing access to stranded reserves of natural gas that cannot be transported by conventional pipelines. Onshore LNG import terminals currently exist in the United States at the following four locations: Everett, Massachusetts; Cove Point, Maryland; Elba Island, Georgia; and Lake Charles, Louisiana. These facilities were built between 1971 and 1982. In 2001, LNG imports into the United States totaled about 238 billion standard cubic feet. There is also one offshore marine LNG terminal, Excelerate Energy, L.L.C.'s (Excelerate) Gulf Gateway Deepwater Port located about 116 miles south of Cameron, Louisiana, which began operation in 2005.

A number of factors are contributing to interest in increasing the level of United States imports of LNG, including higher domestic natural gas costs (Gaul and Young, 2003). The *Annual Energy Outlook 2005* report (EIA, 2005) analyzed a restricted natural gas supply case that assumed no new LNG terminals would be built. This scenario also assumed that the Alaska natural gas pipeline would not be put into operation and that future rates of technological progress for oil and gas exploration and development would be one-half of historical rates. Under this scenario, the price of natural gas to residential consumers would be 12 percent higher in 2015 and 19 percent higher in 2025. Other factors contributing to interest in increasing the level of LNG imports are the leveling-off of domestic gas production and supplies; and technological advances in liquefying, shipping, storing, and regasifying LNG, which have reduced the cost of transporting and importing LNG (Gaul and Young, 2003). The EIA projects that by 2025, annual LNG imports will be 6.4 Tcf, 16 times what they were in 2003.

1.2 PURPOSE AND SCOPE OF THIS STATEMENT

The FERC is the federal agency responsible for authorizing applications to construct and operate onshore LNG import and interstate natural gas transmission facilities. The U.S. Coast Guard (Coast Guard) within the U.S. Department of Homeland Security is the federal agency responsible for determining the suitability of the waterway for LNG marine traffic. The FERC is the lead federal agency for the preparation of this Environmental Impact Statement (EIS) in compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations for implementing NEPA (Title 40 Code of Federal Regulations Parts 1500 to 1508 (40 CFR Parts 1500 to 1508)), and the FERC regulations implementing NEPA (18 CFR Part 380).

The U.S. Army Corps of Engineers (COE); Coast Guard; U.S. Department of the Interior, Fish and Wildlife Service (FWS); U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS); U.S. Environmental Protection Agency (EPA); Mississippi Department of Environmental Quality (MDEQ); and Mississippi Department of Marine Resources (MDMR) are cooperating agencies for the development of this EIS. A cooperating agency has jurisdiction by law or special expertise with respect to environmental impacts involved with the proposal, and is involved in the NEPA analysis. The Pipeline and Hazardous Materials Safety Administration (PHMSA) within the U.S. Department of Transportation (DOT) is participating in the NEPA analysis under the terms of an interagency agreement between the PHMSA, the FERC, and the Coast Guard. The purpose of the interagency agreement is to ensure that these agencies work in a coordinated manner to address land and marine safety and security issues at waterfront LNG facilities, including the terminal facilities and vessel operations.

A draft EIS was prepared and issued for public comment on May 19, 2006. This document is a final EIS that has been prepared to respond to comments received on the draft EIS. All substantive changes in this final EIS are indicated by vertical bars that appear in the margins. The distribution list for the final EIS is provided in Appendix A.

Our¹ principal objectives in preparing this EIS are to:

- identify and assess potential impacts on the natural and human environment that would result from the implementation of the proposed actions, including the Coast Guard's proposed action of issuing an LOR finding the waterway suitable for LNG marine traffic with conditions (see section 2.0);
- describe and evaluate reasonable alternatives to the proposed actions that would avoid or minimize adverse effects on the environment;
- identify and recommend specific mitigation measures, as necessary, to minimize the environmental impacts; and
- facilitate public involvement in identifying the significant environmental impacts.

The FERC will consider the findings in this final EIS in its determination of whether the project should be approved. A final approval will only be granted if, after consideration of both environmental and non-environmental issues, the FERC finds that the proposed project is in the public interest. The environmental impact assessment and mitigation development discussed in the EIS will be important factors in this final determination. The Coast Guard will determine whether to issue an LOR finding the waterway to be suitable for LNG marine traffic with conditions (see section 2.0)

Our analysis in this EIS focuses on the facilities that are under the FERC's jurisdiction (i.e., the LNG import terminal and natural gas pipeline facilities proposed to be constructed by Gulf LNG) as well as the nonjurisdictional facilities that are integrally related to the development of the project (i.e., the electric transmission facilities and water supply pipeline). The analysis in this EIS also includes the LNG vessel transit waterway from the territorial seas to the ship berth at the LNG terminal.

The topics addressed in this EIS include geology; soils and sediments; water resources; wetlands; vegetation; wildlife and aquatic resources; threatened, endangered, and other special status species; land use, recreation, and visual resources; socioeconomics; transportation and traffic; cultural resources; air quality and noise; reliability and safety; cumulative impacts; and alternatives. The EIS describes the affected environment as it currently exists, discusses the environmental consequences of the proposed project, and compares the project's potential impact to that of alternatives. The EIS also presents our conclusions and recommended mitigation measures.

Currently, there is one other proposal to build an LNG import facility in the Pascagoula area. Bayou Casotte Energy, LLC (Bayou Casotte Energy), a subsidiary of Chevron U.S.A. Inc. (Chevron), proposes to site, construct, and operate the Casotte Landing LNG Project (FERC Docket No. CP05-420-000). Although the LNG Clean Energy and Casotte Landing LNG Projects are on similar schedules, the FERC is preparing separate EISs for each of the projects. The Commission does not consider these proposed facilities mutually exclusive alternatives. Rather, both of these proposed projects could help satisfy the increasing regional and national demand for natural gas (see section 3.2.1.3). In addition, the FERC has a regulatory responsibility to act on each of the projects that are filed with it in a timely manner. Linking the environmental analyses of both of the LNG projects in the Pascagoula area into a single EIS could result in delaying action on one of the projects based on insufficient data or unresolved issues associated with the other project. The potential cumulative environmental effects of the two LNG projects, as well as other past, present, and reasonably foreseeable projects and activities are addressed in this EIS (see section 4.14) and in the EIS under preparation for the Casotte Landing LNG Project.

¹ The pronouns "we," "us," and "our" refer to the environmental staff of the FERC's Office of Energy Projects.

1.3 PERMITS, APPROVALS, AND REGULATORY REQUIREMENTS

As the lead federal agency for the LNG Clean Energy Project, the FERC is required to comply with section 7 of the Endangered Species Act of 1973 (ESA), the Magnuson-Stevens Fishery Conservation and Management Act (MSA), section 106 of the National Historic Preservation Act (NHPA), and section 307 of the Coastal Zone Management Act of 1972 (CZMA). Each of these statutes has been taken into account in the preparation of this document.

Section 7 of the ESA, as amended, states that any project authorized, funded, or conducted by a federal agency (e.g., the FERC) should not “jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined...to be critical” (16 United States Code (USC) § 1536(a)(2)). The FERC, or the applicant as a non-federal party, is required to consult with the FWS and NMFS to determine whether any federally listed or proposed endangered or threatened species or their designated critical habitat occur in the vicinity of the proposed project. If, upon review of existing data or data provided by the applicant, the FERC determines that these species or habitats may be affected by the proposed project, the FERC is required to prepare a biological assessment to identify the nature and extent of adverse impact, and to recommend measures that would avoid the habitat and/or species, or would reduce potential impacts to acceptable levels. See section 4.7.1 of this EIS for the status of the ESA review.

The MSA, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), established procedures designed to identify, conserve, and enhance Essential Fish Habitat (EFH) for those species regulated under a federal fisheries management plan. The MSA requires federal agencies to consult with the NMFS on all actions or proposed actions authorized, funded, or undertaken by the agency that may adversely affect EFH (MSA §305(b)(2)). Although absolute criteria have not been established for conducting EFH consultations, the NMFS recommends consolidated EFH consultations with interagency coordination procedures required by other statutes, such as NEPA, the Fish and Wildlife Coordination Act, or the ESA, to reduce duplication and improve efficiency (50 CFR Part 600.920(f)). As part of the consultation process, an EFH Assessment has been prepared and is discussed in further detail in section 4.6.4 of this EIS.

Section 106 of the NHPA requires the FERC to take into account the effects of its undertakings on properties listed in or eligible for listing in the National Register of Historic Places (NRHP), including prehistoric or historic sites, districts, buildings, structures, objects, or properties of traditional religious or cultural importance, and to afford the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on the undertaking. The FERC has requested that Gulf LNG, as a non-federal party, assist in meeting the FERC’s obligation under section 106 by preparing the necessary information and analyses as required by the ACHP procedures in 36 CFR Part 800. See section 4.11 of this EIS for the status of the NHPA review.

The CZMA calls for the “effective management, beneficial use, protection, and development” of the nation’s coastal zone and promotes active state involvement in achieving those goals. As a means to reach those goals, the CZMA requires participating states to develop management programs that demonstrate how these states will meet their obligations and responsibilities in managing their coastal areas. In the State of Mississippi, the MDMR is responsible for reviewing federal agency actions and activities to ensure that they are consistent with Mississippi’s Coastal Management Program (CMP). Because section 307 of the CZMA requires federal agency activities to be consistent to the maximum extent practicable with the enforceable policies of a management program, the FERC requires that Gulf LNG seek a determination of consistency with Mississippi’s CMP. Section 4.8.5 of this EIS provides additional discussion of the Mississippi CMP and the status of the consistency review for the LNG Clean Energy Project.

Besides the FERC, other federal agencies have responsibilities for issuing permits or approvals to comply with various federal laws and regulations. The COE has jurisdictional authority pursuant to section 404 of the Clean Water Act (CWA) (33 USC 1344), which governs the discharge of dredged or fill material into waters of the United States; section 10 of the Rivers and Harbors Act (33 USC 403), which regulates any work or structures that potentially affect the course, condition, or capacity of a navigable waterway; and section 103 of the Marine Protection, Research and Sanctuaries Act of 1972, as amended (MPRSA) (40 CFR Parts 220 to 228), which regulates ocean disposal of dredged material. Some specific elements of the project within the COE's jurisdiction include dredging and placement of the dredged material and construction of the ship berth and unloading facilities within the waters of the United States. As an element of its review, the COE must consider whether a proposed project represents the least environmentally damaging practicable alternative pursuant to the CWA section 404(b)(1) guidelines. The term practicable means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. Permits for wetland activities in Mississippi's Coastal Zone (including Jackson County) are submitted jointly to the COE and the MDMR.

The Coast Guard exercises regulatory authority over LNG facilities that affect the safety and security of port areas and navigable waterways under Executive Order 10173; the Magnuson Act (50 USC 191); the Ports and Waterways Safety Act of 1972, as amended (33 USC 1221, *et seq.*); and the Maritime Transportation Security Act of 2002 (46 USC 701). The Coast Guard is responsible for matters related to navigation safety, vessel engineering and safety standards, and all matters pertaining to the safety of facilities or equipment located in or adjacent to navigable waters up to the last valve immediately before the receiving tanks. The Coast Guard also has authority for LNG facility security plan review, approval and compliance verification as provided in 33 CFR Part 105, and siting as it pertains to the management of marine traffic in and around the LNG facility.

As required by its regulations, the Coast Guard is responsible for issuing an LOR as to the suitability of the waterway for LNG marine traffic. The LOR would be based on the following items:

- environmental impacts on the LNG ship transit waterway from the territorial seas to the ship berth at the LNG terminal;
- density and character of marine traffic;
- locks, bridges, or other manmade obstruction in the waterway; and
- the following factors adjacent to the facility:
 - depth of water;
 - tidal range;
 - protection from high seas;
 - natural hazards, including reefs, rocks, and sandbars;
 - underwater pipes and cables; and
 - distance of berthed vessels from the channel and the width of the channel.

In accordance with 33 CFR Part 127.007, each applicant must submit a Letter of Intent (LOI) to the local Captain of the Port (COTP) to begin the LOR process. On June 14, 2005, the Coast Guard issued a *Navigation and Vessel Inspection Circular – Guidance on Assessing the Suitability of a Waterway for Liquefied Natural Gas (LNG) Marine Traffic* (NVIC 05-05). The purpose of this NVIC is to provide Coast Guard COTP/Federal Maritime Security Coordinator (FMSC), members of the LNG industry, and port stakeholders with guidance on assessing the suitability of a waterway for LNG marine traffic that takes into account conventional navigation safety/waterway management issues contemplated by the existing LOI/LOR process, but in addition, will also take completely into account maritime security implications. In accordance with this guidance, each LNG project applicant is to submit a Waterway Suitability Assessment (WSA) to the cognizant COTP. The WSA is to address the transportation of LNG from the LNG tanker's entrance into United States territorial seas, through its transit to and from the LNG receiving facility, including operations at the vessel/facility interface. In addition, the WSA should address the navigational safety issues and port security issues introduced by the proposed LNG operations. The NVIC 05-05 also provides specific guidance on the timing and scope of the WSA.

The EPA has the authority to review and veto COE decisions on section 404 and section 103 permits. The EPA also has regulatory authority under section 402 of the CWA as well as the Clean Air Act (CAA). In Mississippi, the EPA provides review and oversight of these regulations but has delegated permitting authority to the MDEQ.

We have consulted with the U.S. Department of Defense (DOD) as required by the Energy Policy Act of 2005 (EPAct) and section 3 of the NGA to determine if there are any impacts associated with the project on training or activities on any military installations. No comments or concerns were received from any branch of the military or a military installation in reply to the FERC's scoping notice issued in March 2005.

In addition, in letters dated January 30, 2006 to branches of the military and the DOD, we requested any information regarding impacts on military installations. Because no impacts have been identified, we conclude that there is no impact on military installations associated with this project, and therefore, no concurrence from the Secretary of Defense is required under the EPAct.

Major permits, approvals, and consultations required for the LNG Clean Energy Project are identified in table 1.3-1. The FERC encourages cooperation between applicants and state and local authorities, but this does not mean that state and local agencies, through applications of state and local laws, may prohibit or unreasonably delay the construction or operation of facilities approved by the FERC. Any state or local permits issued with respect to jurisdictional facilities must be consistent with the conditions of any authorization issued by the FERC.²

² See, e.g., *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293 (1988); *National Fuel Gas Supply v. Public Service Commission*, 894 F.2d 571 (2d Cir. 1990); and *Iroquois Gas Transmission System, L.P., et al.*, 52 FERC ¶ 61,091 (1990) and 59 FERC ¶ 61,094 (1992).

TABLE 1.3-1

Major Permits, Approvals, and Consultations for the LNG Clean Energy Project

Agency	Permit/Approval/Consultations ^a	Agency Action
FEDERAL		
Federal Energy Regulatory Commission (FERC)	Authorizations under sections 3 and 7 of the National Gas Act	Consider issuance of Approval of Place of Import and Authorization of Siting, Construction, and Operation of LNG Terminal Facilities (section 3). Consider issuance of Certificate of Public Convenience and Necessity to construct, install, own, operate, and maintain a pipeline (section 7).
Advisory Council on Historic Preservation	National Environmental Policy Act of 1969 (NEPA) Section 106 Consultation, National Historic Preservation Act (NHPA)	Preparation of an Environmental Impact Statement. Has the opportunity to comment on the undertaking and its effects on historic properties.
U.S. Army Corps of Engineers (COE) – Mobile District	Authorization for activities that will occupy, fill, or grade land in a floodplain, streambed, or channel of a stream or other waters of the United States under section 10 of the Rivers and Harbors Act of 1899 Authorization to discharge dredged or fill material into waters of the United States under section 404 of the Clean Water Act (CWA) Authorization for ocean disposal of dredged material under section 103 of the Marine Protection, Research, and Sanctuaries Act (MPRSA)	Consider issuance of permit for placement of structures or work in, or affecting, the course, condition, or capacity of a navigable waterway of the United States, including waters subject to the ebb and flow of the tide. Consider issuance of permit for the placement of dredged or fill material into all waters of the United States, including wetlands. Approval and coordination for ocean disposal of dredged material.
U.S. Department of Commerce National Oceanic and Atmospheric Administration, National Marine Fisheries Service	Consultation regarding compliance with section 7 of the Endangered Species Act; the Magnuson-Stevens Fishery Conservation and Management Act; and the Marine Mammal Protection Act	Consult on marine and anadromous endangered and threatened species, essential fish habitat, and protected marine mammals.
U.S. Department of the Interior Fish and Wildlife Service	Consultation regarding compliance with section 7 of the Endangered Species Act, the Migratory Bird Treaty Act, and the Fish and Wildlife Coordination Act	Consult on threatened and endangered species and migratory birds. General consultation regarding conservation of fish and wildlife resources.
U.S. Environmental Protection Agency – Region 4	Section 404 of the CWA (veto power for wetland permits issued by the COE) Section 402, CWA, National Pollutant Discharge Elimination System (NPDES) Permit Clean Air Act (CAA) permits for the construction of a stationary source of air pollutant emissions and for operation of the source Section 103 of the MPRSA (veto power for ocean disposal of dredged material permits issued by the COE)	Oversee issuance of the section 404 permit. Permitting authority delegated to the Mississippi Department of Environmental Quality. Permitting authority delegated to the Mississippi Department of Environmental Quality. Oversee issuance of the section 103 permit.

TABLE 1.3-1 (cont'd)

Major Permits, Approvals, and Consultations for the LNG Clean Energy Project

Agency	Permit/Approval/Consultations ^a	Agency Action	
U.S. Department of Homeland Security – U.S. Coast Guard	Facility Security Plan	Examine the Facility Security Plan.	
	Letter of Recommendation	After the operator submits its Letter of Intent, the Captain of the Port determines the suitability of the waterway for issuance of a Letter of Recommendation to the operator.	
	LNG Vessel Operation and Emergency Contingency Plan	Examine the LNG Vessel Operation and Emergency Contingency Plan.	
	Operations Manual and Emergency Manual	Examine a plan to deal with the transfer operations and emergency response.	
	Permission to Establish Aids to Navigation	Captain of the Port ensures that any private aid to navigation does not interfere with established aids to navigation.	
U.S. Department of Transportation – Pipeline and Hazardous Materials Safety Administration	LNG Facilities Petition for Approval	Review and consider approval of a plan for responding to spills from LNG ships. Consider issuance of approval that the new LNG facility meets standards governing siting, design, installation, personnel qualifications, and training.	
STATE	Mississippi Department of Environmental Quality	Section 401 CWA, Water Quality Certification	Review and issue water quality certification.
NPDES Hydrostatic Discharge Permit		Review and issue NPDES hydrostatic test water discharge permit.	
NPDES Construction Stormwater Permit		Review and issue NPDES construction stormwater permit.	
NPDES Discharge Permit (terminal operations)		Review and issue NPDES permit for discharge of vaporization process condensate.	
NPDES Industrial Stormwater Permit		Review and issue NPDES industrial stormwater permit for operation of the LNG terminal.	
Mississippi Department of Marine Resources	Permit to Construct/Permit to Operate (Title V, CAA)	Consider issuance of written authorization to build, install, alter, replace, or operate equipment that emits or controls the emission of air contaminants.	
	Federal Consistency Review with Coastal Zone Management Act (CZMA) program policies.	Consider consistency with CZMA.	
Mississippi Department of Archives and History	Joint wetlands permit with the COE	Review and issue wetlands permit jointly with the COE.	
Mississippi Department of Archives and History	Section 106, NHPA	Review and comment on undertakings potentially affecting cultural resources.	
Mississippi Museum of Natural Science Natural Heritage Program	Consultation regarding state-listed threatened and endangered species.	Consult on state-listed threatened and endangered species that may be in the project area.	
Mississippi Department of Transportation	Road right-of-way permit	Consider issuance of permit for activities in state road rights-of-way.	

TABLE 1.3-1 (cont'd)

Major Permits, Approvals, and Consultations for the LNG Clean Energy Project

Agency	Permit/Approval/Consultations ^a	Agency Action
LOCAL		
Jackson County Planning Department	Building permit	Consider issuance of building permit for terminal and pipeline construction.
	Zoning variance for building height	Consider zoning variance to existing height restrictions to accommodate height of LNG storage tanks.

^a A number of the permits described provide agencies, the public, and other stakeholders the opportunity to review and comment on the project (e.g., FERC's NEPA process, COE's section 10/404 permit, etc.).

1.4 PUBLIC REVIEW AND COMMENT

On November 17, 2004, Gulf LNG filed a request with the FERC to implement the Commission's Pre-Filing Process for the LNG Clean Energy Project. At that time, Gulf LNG was in the preliminary design stage of the project and no formal application had been filed with the FERC. On December 16, 2004, the FERC granted Gulf LNG's request and established a pre-filing docket number (PF05-5-000) to place information filed by Gulf LNG and related documents issued by the FERC into the public record. The purpose of the Commission's Pre-Filing Process is to encourage the early involvement of interested stakeholders, facilitate interagency cooperation, and identify and resolve issues before an application is filed with the FERC.

As part of the Pre-Filing Process, Gulf LNG initiated a public outreach program in which it contacted and/or met with various project stakeholders early in the preliminary design stage of the project. Stakeholders included agency representatives, elected officials and community leaders, civic clubs and organizations, local safety and security personnel, and landowners. The general public was given an opportunity to learn more about the project at an open house held in Moss Point, Mississippi on April 5, 2005. Additionally, Gulf LNG held a site visit that was open to the public on April 20, 2005.

The FERC formally introduced the Pre-Filing Process to various project stakeholders by issuing a *Notice of Environmental Review and Scoping for the Proposed LNG Clean Energy Project and Request for Comments on Environmental Issues* on March 3, 2005. Following this, the FERC issued a *Notice of Intent to Prepare an Environmental Impact Statement for the Proposed Casotte Landing LNG Project, and Request for Comments on Environmental Issues, Notice of Public Scoping Meeting, and Site Visit for both Casotte Landing LNG Project and LNG Clean Energy Project* on April 7, 2005. These notices were sent to 225 interested parties including federal, state, and local officials; agency representatives; conservation organizations; Native American tribes; local libraries and newspapers; landowners within 0.5 mile of the proposed LNG terminals; and property owners along the proposed pipeline route. These notices encouraged project stakeholders or interested parties to provide input on environmental issues that should be addressed during the environmental review process. In total, six comment letters on the LNG Clean Energy Project were received by the FERC in response to these pre-filing notices.

On April 20, 2005, the FERC conducted a public scoping meeting in Pascagoula to provide an opportunity for the general public to learn more about the Casotte Landing LNG Project and the LNG Clean Energy Project and to participate in our analysis by commenting on issues to be included in the EIS. Nine people commented at the meeting. Comments covered a wide variety of topics including reliability and safety, alternatives, land use, recreation, and socioeconomics. A transcript of these comments is part of the public record for the LNG Clean Energy Project and is available for viewing on the FERC internet website (<http://www.ferc.gov>).³

The Coast Guard published a notice in the Federal Register on November 17, 2005 stating that it was preparing an LOR as to the suitability of the Pascagoula Bar, Horn Island Pass, Lower Pascagoula, and Bayou Casotte Channels for LNG marine traffic. On December 7, 2005, the Coast Guard conducted a public meeting in Pascagoula to provide an opportunity for the general public to provide comments on waterway suitability and maritime safety and security aspects of the proposed LNG facilities. Five people commented at the meeting. A transcript of these comments is also part of the public record for the LNG Clean Energy Project.

³ Using the "eLibrary" link, select "General Search" from the eLibrary menu and enter the docket number, excluding the last three digits, in the "Docket Number" field (i.e., CP06-12, CP06-13 and CP06-14). Be sure to select an appropriate date range.

In addition to the public notice and scoping process discussed above, the FERC conducted agency consultations and participated in interagency meetings to identify issues that should be addressed in this EIS. This included an interagency meeting in Pascagoula on April 20, 2005 to discuss the project and the environmental review process with other key agencies and stakeholders. Meeting attendees included representatives from the COE; Coast Guard; NMFS; FWS; DOT; MDMR; Gulf States Marine Fisheries Commission; MDEQ; Congressman Gene Taylor's Office; and the Jackson County Port Authority (JCPA). The FERC staff also attended a meeting coordinated by Gulf LNG to discuss dredged material placement alternatives with the COE, NMFS, FWS, and MDMR on September 21, 2005.

Prior to the publication of the draft EIS, the FERC prepared an advance draft EIS that was distributed whole or in part to the COE, EPA, NMFS, FWS, MDMR, MDEQ, and Coast Guard. Sections of the draft EIS were written with the cooperation and assistance of these agencies.

The FERC prepared a draft EIS for the LNG Clean Energy Project and issued a Notice of Availability (NOA) of the draft EIS on May 19, 2006. In accordance with CEQ's regulations implementing NEPA, the NOA established a 45-day comment period ending on July 10, 2006; described procedures for filing comments on the draft EIS; and announced the time, date, and location of the public comment meeting. The NOA also indicated that additional project information could be obtained from the Commission's Office of External Affairs and on the FERC's internet website. A formal notice was also published in the Federal Register on May 25, 2006, indicating that the draft EIS was available and had been mailed to individuals and organizations on the mailing list prepared for the project.

The FERC mailed 214 copies of the draft EIS to interested parties, including federal, state, and local officials and agencies; special interest groups; parties to the proceedings; area libraries and newspapers; and individuals and affected landowners who requested a copy of the draft EIS. The FERC also conducted a public meeting in Pascagoula, Mississippi on June 22, 2006. A total of four people provided comments at this meeting. A transcript of the meeting is part of the public record for the LNG Clean Energy Project. These comments, as well as five written comments on the draft EIS prepared by the public and agencies, are provided along with our responses in Appendix K. The substantive changes in the final EIS are indicated by vertical bars that appear in the margins. The changes were made both in response to comments received on the draft EIS and as a result of updated information that became available after issuance of the draft EIS. The final EIS was mailed to the agencies, individuals, and organizations on the mailing list provided in Appendix A and submitted to the EPA for formal issuance of a NOA.

Table 1.4-1 lists the issues identified during the public scoping process for the LNG Clean Energy Project. The most frequently received comments on the project relate to LNG safety, alternatives, ship traffic, fishing/shrimping, Gulf sturgeon critical habitat, wetlands, and dredged material placement.

TABLE 1.4-1

Issues Identified and Comments Received During the Public Scoping Process for the LNG Clean Energy Project

Issue/Specific Comment	EIS Section Addressing Comment
GENERAL	
Purpose of and need for proposed project; natural gas markets; local and national benefits.	1.1
Other permit requirements.	1.3
More inclusive environmental mailing list; broader distribution of project notices.	1.4
PROJECT DESCRIPTION	
Need for additional pipeline expansion; existing pipeline capacities.	2.1
Description of LNG ship unloading procedures.	2.1.1.1
Description of vaporization system(s).	2.1.1.3
Description of dredging operations; maintenance dredging plans.	2.4.1.3, 2.7.1
Operation and maintenance requirements; employee training/licensing standards.	2.7, 4.13.7.1
ALTERNATIVES	
Alternative vaporization technologies; negative impacts of open loop/seawater vaporization.	3.4.2
Alternatives to LNG as a source of energy; energy conservation.	3.1
System alternatives; expansion of existing LNG terminals or industrial facilities.	3.2
LNG terminal at alternative site offshore.	3.2.2
Consideration of alternative LNG terminal sites; site LNG terminal closer to market area.	3.3
Alternative dredged material placement sites.	3.6
SOILS AND SEDIMENTS	
Need for sediment sampling prior to dredging and dredged material placement.	4.2.2
Mitigation during dredging to reduce turbidity and potential spread of contaminants.	4.2.2, 4.3.2.2
Describe dredged material placement locations; upland placement of dredged materials.	2.4.1.3, 3.6
WATER RESOURCES	
Discharge of water from LNG vaporizers; potential chemical or thermal impacts on receiving waters.	4.3.2.2
Water quality issues at dredged material placement location(s).	4.3.2.2
WETLANDS	
Wetland impacts at LNG terminal and along pipeline route; wetland mitigation.	4.4.1, 4.4.2
WILDLIFE AND AQUATIC RESOURCES	
Impacts on marine mammals, fisheries, and aquatic habitats, including essential fish habitat; habitat impacts should be mitigated.	4.6
Introduction of invasive species.	4.6.2.2
Potential impacts of ballasting operations on aquatic organisms.	4.6.2.2
Need for pre- and post-construction benthic surveys.	4.6.2.2
THREATENED AND ENDANGERED SPECIES	
Potential impacts on threatened and endangered species (e.g., Gulf sturgeon, sea turtles); impacts on designated critical habitat.	4.7
Endangered Species Act consultation requirements.	4.7
LAND USE, RECREATION, AND VISUAL RESOURCES	
Impacts on other local land uses and recreation (e.g., other industries, recreational boating, fishing, shrimping).	4.8.1, 4.8.3
Use of eminent domain.	4.8.1
Impacts on existing special management areas and mitigation sites.	4.8.3
Visual impact of LNG terminal and LNG ships on Gulf Islands National Seashore and the areas' natural scenic qualities.	4.8.3, 4.8.4
SOCIOECONOMICS	
Project impacts on property values and insurance rates.	4.9.5
Insurance/liability issues.	4.9.5

TABLE 1.4-1 (cont'd)

Issues Identified and Comments Received During the Public Scoping Process for the LNG Clean Energy Project	
Issue/Specific Comment	EIS Section Addressing Comment
Negative economic impacts associated with LNG facility development; discouraging other economic development.	4.9
TRANSPORTATION AND TRAFFIC	
Marine transportation; volume of LNG marine traffic; ship/boat traffic impacts.	4.10.2
Potential project impacts on airplane traffic and/or use patterns.	4.10
AIR QUALITY	
Emission of pollutants and potential venting and/or flaring of natural gas.	4.12.1
Project emission impacts on local attainment levels.	4.12.1
RELIABILITY AND SAFETY	
LNG terminal and ships as targets for terrorists.	4.13.6
Reliability of facility and ship operations.	4.13
Risks associated with hurricanes.	4.13, 4.1.3.4
Risks of ship collisions, allisions, and groundings.	4.13.5
Risks to nearby refinery.	4.13.4
Risks associated with operation of nearby facilities (e.g., flares associated with refinery; accidents at nearby facilities).	4.13.4
Contamination of LNG; explosive properties of LNG.	4.13.1
History of LNG accidents.	4.13
Safety, security, maintenance procedures at the LNG terminal and on the ships; facility lighting, guards, cameras, and patrols.	2.8, 4.13
U.S. Department of Transportation regulations; inspection requirements.	4.13
Emergency response procedures and equipment.	2.8, 4.13.5
Costs of providing federal, state, and local emergency response and security services.	4.13.5
CUMULATIVE IMPACTS	
Cumulative impacts of two LNG terminals in the Pascagoula area.	4.14
Broader/regional examination of cumulative impacts; cumulative impacts and risks of LNG facilities.	4.14
Cumulative impact analysis following guidelines developed by the U.S. Army Corps of Engineers.	4.14
Air quality issues, particularly given other industrial activities in the area.	4.14.8