

1.0 INTRODUCTION

On December 11, 2006, the Federal Energy Regulatory Commission (FERC or Commission) received an application from the Gulf South Pipeline Company, LP (Gulf South) pursuant to Section 7(c) of the Natural Gas Act and Part 157 of the Commission's regulations for a Certificate of Public Convenience and Necessity (Certificate) to construct, operate, and maintain the following natural gas facilities:

- Approximately 110.8-mile-long, 42-inch-diameter natural gas pipeline extending easterly from Simpson County, Mississippi, to Choctaw County, Alabama.
- Three new compressor stations—the Delhi Compressor Station in Richland Parish, Louisiana; the Harrisville Compressor Station in Simpson County, Mississippi; and the Destin Compressor Station in Clarke County, Mississippi.
- Other ancillary facilities, including five meter and regulation (M/R) facilities, eight mainline valves (MLV), one side valve, and two pig launcher and/or receiver facilities.

The Commission's staff has prepared this Environmental Impact Statement (EIS) to analyze the environmental impacts that would likely occur as a result of the construction and operation of these proposed facilities, collectively referred to as the Southeast Expansion Project (Project).

1.1 PROJECT PURPOSE AND NEED

The purpose of this proposed Project is to provide producers in eastern Texas and northern Louisiana an eastern market outlet for production from CenterPoint Energy Gas Transmission Company (CenterPoint) in the Perryville, Louisiana. The proposed Project will provide access to the Florida markets via an interconnect with Destin Pipeline Company, LLC (Destin), and into northeast markets via an interconnect at Transcontinental Pipe Line Company (Transco) Station 85. Construction and operation of the proposed Project would help meet growing energy demands and would enhance reliability by providing increased access to domestic natural gas supplies.

The Energy Information Administration (EIA) estimates that total energy consumption in the United States will increase from 100.2 quadrillion British thermal units (BTU) per year in 2005 to 131.2 quadrillion BTU per year in 2030 (EIA, 2007). To maintain pace with growing energy demands, the EIA anticipates that consumption of natural gas in the United States will grow from 22.0 trillion cubic feet (Tcf) per year in 2005 to 26.1 Tcf by 2030. The growth in natural gas demand is being driven primarily by increased use of natural gas for electricity generation and industrial applications (EIA, 2007).

The United States' natural gas supply currently comes from three main sources: domestic production, pipeline imports from Canada and Mexico, and import of liquefied natural gas (LNG). Net pipeline imports of natural gas from Canada and Mexico are expected to decline in coming years, and although LNG represents an increasingly important source of natural gas, LNG imports are only expected to account for about 15 percent of the total United States natural gas consumption by 2030. Domestic production of natural gas will continue to account for the majority of total United States consumption, with onshore production expected to constitute the bulk of that supply, growing to 20.6 Tcf by 2030 (EIA, 2007). Onshore production of natural gas from unconventional sources (e.g., shale, tight sands, coal bed methane) is expected to be a major contributor to that growth. The EIA (2007) projects that

unconventional natural gas production in the lower 48 states will account for about 50 percent of the total domestic production by 2030.

1.2 PURPOSE AND SCOPE OF THIS EIS

The FERC is the federal agency responsible for evaluating applications filed for authorization to construct and operate interstate natural gas pipeline facilities. As such, the FERC is the lead federal agency for the preparation of this EIS, in compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA) and the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and the FERC regulations implementing NEPA (18 CFR 380).

Consistent with NEPA and their respective responsibilities and regulations, the U.S. Fish and Wildlife Service (FWS) and the U.S. Army Corps of Engineers (COE) are federal cooperating agencies for the development of this EIS.

Our¹ principal purposes for preparing this EIS are to:

- Identify and assess the potential direct, indirect, and cumulative impacts on the natural and human environment that would result from the implementation of the proposed action.
- Describe and evaluate reasonable alternatives to the proposed action that would avoid or minimize adverse effects on the natural and human environment.
- Identify and recommend specific mitigation measures, as necessary, to minimize significant environmental impacts.
- Facilitate public involvement in identifying the significant environmental impacts.

The topics addressed in this EIS include alternatives, geology, soils, water resources, wetlands, vegetation, wildlife and aquatic resources (including threatened, endangered, and special status species), land use, socioeconomics, cultural resources, air quality and noise, reliability and safety, and cumulative impacts. This EIS describes the affected environment as it currently exists, and the environmental consequences of constructing and operating the proposed Project; it compares the proposed Project's potential impacts to those of alternatives; and it presents our conclusions and recommended mitigation measures.

1.3 PERMITS, APPROVALS, AND REGULATORY REQUIREMENTS

A number of federal, state, or local regulatory agencies have permit or approval authority or consultation requirements for portions of the proposed Project (see Table 1.3-1). The FERC states in its orders that applicants should cooperate with federal, state, and local agencies. However, any state or local permits issued with respect to jurisdictional facilities must be consistent with the conditions of any Certificate the FERC may issue. The FERC encourages cooperation between interstate pipeline companies and local authorities, but state and local authorities may not prohibit or unreasonably delay the construction or operation of facilities approved by the FERC through application of state and local laws.

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

**TABLE 1.3-1
Summary of Major Permits, Approvals, and Consultations
for the Proposed Southeast Expansion Project**

Agency	Permit/Clearance/Approval	Agency Action (Status)
Federal		
Federal Energy Regulatory Commission	Certificate of Public Convenience and Necessity under Section 7(c) of the Natural Gas Act	Determine whether the construction and operation of the proposed natural gas pipeline is in the public interest. (Application Submitted on December 11, 2006)
Advisory Council on Historic Preservation	Consultation under Section 106 of the National Historic Preservation Act (NHPA)	Has the opportunity to comment on the undertaking. (Consultation pending)
U.S. Army Corps of Engineers (COE) Mobile District (Lead office for project review) and Vicksburg District	Permits under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act of 1899	Consider issuance of Section 404 permits for the placement of dredge or fill material into all waters of the United States, including wetlands. Considers issuance of Section 10 permit for work in or affecting navigable waters of the United States. (Consultation ongoing, permit application anticipated submittal April 2007)
U.S. Fish and Wildlife Service (FWS)	Consultation under Section 7 of the Endangered Species Act, the Migratory Bird Treaty Act, and the Fish and Wildlife Coordination Act	Consult on endangered and threatened species and migratory birds; general consultation regarding conservation of fish and wildlife resources. (Consultation ongoing)
National Park Service	Consultation under the Wild and Scenic Rivers Act	Review for impacts on designated Natural Resource Inventory Streams. (Consultation ongoing)
U.S. Environmental Protection Agency (EPA)	Compliance with Sections 401, 402, and 404 of the Clean Water Act	Consider issuance of water use and crossing, National Pollutant Discharge Elimination System (NPDES) discharge, stormwater, and wetland dredge-and-fill permits. Permitting authority delegated to the states. (Consultation is ongoing)
U.S. Department of Transportation Federal Highway Administration	Encroachment permit	Consider issuance of permit to work within road right-of-way. (Consultation is ongoing, permit application pending)
State of Alabama		
Alabama Department of Conservation and Recreation (ADCR)	Threatened and Endangered Species Consultations	Review and comment on the impacts to state listed species. (Consultation is ongoing)
ADCR, Alabama Freshwater and Fisheries Division	Fisheries, Lands, Habitats of Concern, Water Resources Consultations	Review and comment on the impacts to state-listed species. (Consultation is ongoing)
Alabama Department of Environmental Management (ADEM)	Section 401 Water Quality Certification	Consider issuance of permit for stream and wetland crossing in conjunction with COE Section 404 permit. (Consultation ongoing, permit application pending)
	Groundwater, Sensitive Waterbody and Surface Water Resources Consultations	Consult on the impacts to state groundwater and waterbodies. (Consultation ongoing)

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Agency	Permit/Clearance/Approval	Agency Action (Status)
	NPDES – Hydrostatic Test Discharge Permit	Consider issuance of a Section 402 permit regulation hydrostatic test water discharge, and construction dewatering to waters of the state. (Consultation ongoing, permit application pending)
	NPDES – Construction Stormwater Discharge Permit	Consider issuance of a Section 402 permit regulation hydrostatic test water discharge, and construction dewatering to waters of the state. (Consultation is ongoing, permit application pending)
Section 106, National Historic Preservation Act	Alabama Historic Commission	Review and comment on project activities potentially affecting cultural resources. (Consultations ongoing)
Alabama Department of Transportation	Road Crossing Permits	Consider issuance of permits to cross and work within the right-of-way of state highways. (Consultation is ongoing, permit application pending)
State of Mississippi		
Mississippi Museum of Natural Science (MMNS)	Threatened and Endangered Species Consultations	Review and comment on the impacts to state-listed species. (Consultation is ongoing)
MMNS, Department of Wildlife, Fisheries and Parks	Fisheries, Land, Habitats of Concern, Water Resources Consultations	Review and comment on the impacts to state-listed species. (Consultation is ongoing)
Mississippi Department of Environmental Quality (MDEQ)	Section 401 Water Quality Certification	Consider issuance of a permit for stream and wetland crossing in conjunction with ACE Section 404 permit. (Consultation ongoing, permit application pending)
	Groundwater, Sensitive Waterbody and Surface Water Resources Consultations	Consult on the impacts to state groundwater and waterbodies. (Consultation ongoing)
	NPDES – Hydrostatic Test Discharge Permit	Consider issuance of a Section 402 permit regulation hydrostatic test water discharge, and construction dewatering to waters of the state. (Consultation ongoing, permit application pending)
	Air Quality Permit	Consider issuance of a permit to construct and operate facilities with the potential for air emissions. (Consultation ongoing, permit application pending)
Mississippi Department of Transportation	Road Crossing Permits	Consider issuance of permits to cross and work within the right-of-way of state highways. (Consultation ongoing, permit application pending)
Mississippi Department of Archives and History, Division of Historic Preservation	Section 106, National Historic Preservation Act	Review and comment on project activities potentially affecting cultural resources. (Consultations ongoing)

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Agency	Permit/Clearance/Approval	Agency Action (Status)
State of Louisiana		
Louisiana Department of Wildlife and Fisheries (LDWF)	Threatened and Endangered Species Consultations	Review and comment on the impacts to state-listed species. (Consultation is ongoing)
Louisiana Department of Environmental Quality (LDEQ)	Air Quality Permit	Consider issuance of a permit to construct and operate facilities with the potential for air emissions. (Consultation ongoing, permit application pending)
	Hydrostatic Test Water Withdrawal Permit	Consider issuance of a permit for the withdrawal of hydrostatic water/ (Consultation ongoing, permit application pending)
	NPDES – Hydrostatic Test Water Discharge Permit	Consider issuance of a Section 402 permit regulation hydrostatic test water discharge, and construction dewatering to waters of the state. (Consultation ongoing, permit application pending)
Louisiana Department of Transportation	Road Crossing Permits	Consider issuance of permits to cross and work within the right-of-way of state highways. (Consultation ongoing, permit application pending)
Section 106, National Historic Preservation Act	Louisiana Department of Culture, Recreation, and Tourism	Review and comment on project activities potentially affecting cultural resources. (Consultations ongoing)

As the lead federal agency for the proposed Project, the FERC has certain obligations under Section 7 of the Endangered Species Act (ESA) and Section 106 of the National Historic Preservation Act (NHPA). At the federal level, required permits and approval authority outside of the FERC's jurisdiction include compliance with the Clean Water Act (CWA), the Rivers and Harbors Act of 1899, and the Clean Air Act (CAA). 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 (for example, 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 Gulf South as a non-federal party, is required to consult with the FWS to determine whether any species federally listed or proposed for listing as endangered or threatened, or their designated critical habitat occur in the vicinity of the proposed Project. If upon review of existing data or data provided by Gulf South the FERC determines that these species or habitats may be adversely affected by the proposed Project, the FERC is required to prepare a biological assessment to identify the nature and extent of the adverse impact and to recommend measures that would avoid the habitat and/or species or would reduce potential impacts to acceptable levels. See Section 3.7 of this Draft EIS for further discussion of our ESA review.

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 South, as a non-federal party, assist in meeting the FERC's obligations under Section 106 by preparing the necessary information and analyses as required by the ACHP procedures in 36 CFR 800. Additional information on Section 106 consultation is provided in Section 3.10 of this Draft EIS.

Gulf South is required to comply with Sections 401, 402, and 404 of the CWA. The EPA has delegated water quality certification (Section 401) to the jurisdiction of individual state agencies, but the EPA may assume this authority if no state program exists, if the state program is not functioning adequately, or at the request of a state. Water used for hydrostatic testing of pipelines that is point-source discharged into waterbodies requires a National Pollutant Discharge Elimination System (NPDES) permit (Section 402) issued by the state with EPA oversight.

The COE has responsibility for determining compliance with the regulatory requirements of Section 404 of the CWA. The EPA also independently reviews Section 404 wetland dredge-and-fill applications for the COE and has Section 404(c) veto power for wetland permits issued by the COE. The Section 404 permitting process regulates the discharge of dredge or fill material associated with the construction of pipelines across streams and in wetlands. Before an individual Section 404 permit can be issued, the CWA requires completion of a Section 404(b)(1) guidelines analysis. The FERC, in the NEPA review required to prepare this Draft EIS, has analyzed the technical issues required for the Section 404(b)(1) guidelines analysis, including analysis of natural resources and cultural resources that would be affected by the proposed Project, as well as analyses of alternatives and route variations that would eliminate or minimize the discharge of fill material into waters of the United States. The COE, as a federal cooperating agency, may use the Draft EIS to support its decision on the Section 404 permit for the proposed Project. Water resources and wetlands are discussed in Section 3.3 and Section 3.4, respectively.

In addition to its CWA responsibilities, the COE has jurisdiction over Section 10 permits. Section 10 permits would be required for all construction activities in navigable waterways under the Rivers and Harbors Act of 1899.

Ambient air quality is protected by federal regulations under the CAA. These regulations include compliance under the new source performance standards (NSPS) and the requirements for the prevention of significant deterioration (PSD). The federal permitting process for the CAA has been delegated to individual state agencies. Although applications are reviewed by both the states and the EPA, the states would determine the need for NSPS or PSD permits. Air quality and applicable regulations are discussed further in Section 3.11.1 of this Draft EIS.

1.4 PUBLIC REVIEW AND COMMENT

On June 20, 2006, Gulf South filed a request with the FERC to implement the Commission's Pre-Filing Process for the Southeast Expansion Project. We granted Gulf South's request to use the Pre-Filing Process on June 28, 2006, and established a Pre-Filing docket number (PF06-31-000) to place information related to the proposed Project into the public record. The Pre-Filing process was established 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 their outreach efforts, Gulf South mailed notification letters to landowners and to government and agency officials, and notified the general public of the proposed Project, inviting them to attend open houses held on September 6, 7, and 14, 2006, to learn about the proposed Project and to ask questions and express their concerns. Notifications of the open houses also were published in local

newspapers. The open houses were held in Mendenhall and Heidelberg, Mississippi, and in Butler, Alabama, on September 6, 7, and 14, 2006, respectively. The FERC staff attended the open houses to explain the environmental review process to interested stakeholders and accept comments about the proposed Project. The questions and concerns raised by the public at the open houses are addressed in this Draft EIS.

As part of the Pre-Filing process, on September 5, 2006, we issued a *Notice of Intent to Prepare an Environmental Impact Statement for the Proposed Southeast Expansion Project, Request for Comments on Environmental Issues, and Notice of Public Scoping Meetings* (NOI). The NOI was sent to affected landowners; federal, state, and local government agencies; elected officials; environmental and public interest groups; Native American tribes; local libraries and newspapers; and other interested parties. The NOI provided a summary of the proposed Project, outlined our NEPA-required environmental review process, provided a list of the then currently identified environmental issues, and requested comments on the scope of the analysis for the Draft EIS. The NOI also listed the locations, dates, and times of three public scoping meetings that were sponsored by the FERC to give the general public an opportunity to learn more about the proposed Project and to comment on environmental issues to be addressed in the Draft EIS. These meetings were held in Mendenhall and Heidelberg, Mississippi, and in Butler, Alabama, on September 19, 20, and 21, 2006, respectively.

As a result of engineering changes and customer requests made between the September 2006 FERC scoping meetings and the development of this Draft EIS, Gulf South added two additional compressor stations (Delhi and Destin compressor stations) to the proposed Project. To ensure that the public surrounding these compressor stations had adequate knowledge of the compressor station additions and an adequate avenue through which to comment, the FERC issued a letter on November 28, 2006, to those landowners (a total of 33) within a 0.5-mile radius of each of the two new compressor stations.

The transcripts of all scoping meetings, as well as all written comments received before and after the scoping meetings, are part of the public record for the proposed Project and are available for viewing on the FERC Internet website (www.ferc.gov). During the Pre-Filing and scoping periods for the proposed Projects, we received a total of 25 verbal and written comment letters from members of the general public and federal and state resource agencies. The issues and concerns identified by commentors during the public scoping process for the proposed Project are summarized in Table 1.4-1, which also identifies the Draft EIS section in which these issues are addressed.

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 Draft EIS. These activities included participation in interagency meetings on December 5, 2006, with the FWS, Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP) and the Mississippi Natural Heritage Program (MNHP); on December 6, 2006, with the Mississippi Secretary of State Lead Council; on December 8, 2006, with the Alabama Department of Environmental Management (ADEM); and on December 8, 2006, with the Alabama Department of Conservation and Natural Resources (ADCNR).

This Draft EIS has been filed with the EPA. A formal notice was published in the Federal Register indicating that the Draft EIS is available, and has been mailed to individuals and organizations on the distribution list prepared for the proposed Project (see Appendix A). In accordance with the CEQ regulations implementing the NEPA, the public has 45 days to comment on this Draft EIS. We will review and use the comments received to prepare a Final EIS for the proposed Project. All timely comment letters received on this Draft EIS will be addressed in the Final EIS.

**TABLE 1.4-1
Issues Identified and Comments Received During the
Public Scoping Process for the Proposed Southeast Expansion Project**

Issue/Specific Comments	Draft EIS Section Addressing Comment
General	
Project purpose and need	1.1
Public notification requirements	1.3, 1.4
Describe construction methods and land requirements	2.2, 2.3, 3.8
Maintenance procedures to be implemented during operation, including vegetation management and inspections	2.5, 2.6, 3.5, 3.12
Potential damage to existing utilities, including water lines and irrigation systems	2.3
Geology and Soils	
Impacts to soils, including compaction, drainage, and erosion potential following construction, and associated mitigation	3.2
Water Resources	
Construction-related impacts to irrigation wells; potential for contamination; and monitoring requirements	3.3.1
Impacts to springs	3.3
Hydrostatic water withdrawals and the impact to streams	2.3, 3.3.2
Vegetation and Wetlands	
Avoidance and minimization of impacts to sensitive habitats, including wetlands, bottomland hardwoods, riparian habitats, and native prairies and rangelands during construction and maintenance activities; mitigation for Project-related effects	3.3, 3.4, 3.5, 3.6
Use of native vegetation and seed mixes to restore disturbed areas	3.2, 3.4, 3.5
Fish and Wildlife Resources	
Impacts to fish and wildlife habitat	3.4, 3.5, 3.6
Collocation with other existing rights-of-way to minimize habitat fragmentation	3.4, 3.5, 3.6
Threatened, Endangered, and Special Status Species	
Potential impacts to state and federally protected species or their habitat	3.7
Land Use, Recreation and Special Interest Areas, and Visual Resources	
Impacts to affected property, including agriculture, silviculture activities, and property access during operation	2.3, 3.5, 3.8
Proximity of pipeline to occupied structures	3.8
Reduced property access during construction activities in regard to livestock	2.3, 3.8
Allowable uses/restrictions on future development along the permanent right-of-way	3.8

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Public Scoping Process for the Proposed Southeast Expansion Project**

Issue/Specific Comments	Draft EIS Section Addressing Comment
Impacts of multiple pipeline and utility rights-of-way	3.8, 4.4
Air Quality and Noise	
Potential air emission impacts from compressor stations during operation	3.11.1
Potential impacts from construction-related noise	3.11.2
Potential noise impacts from compressor stations during operations	3.11.2
Cultural Resources	
Identification, evaluation, and protection of potentially affected cultural resources	3.10
Native American notification and consultation	3.10
Socioeconomics	
Potential effect on property values	3.9
Loss of timber production values for affected silviculture operations	3.8, 3.9
General economic effects to agricultural operations	3.9
Potential for landowner liability associated with accidental pipeline damage; associated insurance premium effects	3.9
Economic impact on the local economy	3.9
Responsibility for payment of property taxes along pipeline right-of-way	3.9
Reliability and Safety	
Public safety; risk of leak, explosion, or catastrophic accident	3.12
Stability and integrity of pipeline; potential for damage from outside forces, such as agricultural operations and equipment	2.6, 3.12
Cumulative Impacts	
Cumulative impacts of similar proposed pipeline projects	3.13
Alternatives	
Analysis of alternative pipeline routes and aboveground facility locations, including alternative compressor station sites	4.3, 4.4, 4.5
Use of alternative fuels to reduce need for the proposed Project	4.1