

124 FERC ¶ 61,066
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman;
Sudeen G. Kelly, Marc Spitzer,
Philip D. Moeller, and Jon Wellinghoff.

Petal Gas Storage, L.L.C.

Docket No. CP08-66-000

ORDER ISSUING CERTIFICATE

(Issued July 18, 2008)

1. On January 31, 2008, Petal Gas Storage, L.L.C. (Petal Gas) filed an application for a certificate of public convenience and necessity authorizing it to construct and operate in Hattiesburg, Mississippi, two new salt dome natural gas storage caverns, to add three additional compression units to the existing Petal No. 3 Compressor Station, and to construct a control room. In addition, Petal Gas seeks authority to interconnect the proposed new caverns with Petal Gas' existing storage facilities through the construction and operation of new natural gas pipeline facilities and to construct and operate freshwater and brine pipelines. For the reasons discussed below, the Commission will issue the requested certificate, subject to conditions.

Background

2. Petal Gas is a Delaware limited liability company with its principal place of business in Forrest County Mississippi. It is a wholly-owned subsidiary of Enterprise Products Partners, L.P. In 1993, the Commission issued Petal Gas an initial certificate authorizing it to construct, own and operate Cavern No. 6 on the Petal Salt Dome in Forrest County, Mississippi.¹ Since 1999, the Commission has issued numerous certificates to Petal Gas to expand its facilities, including, in the order of certification, Cavern Nos. 7, 3, 8, 9 and 10.² In 2000, Petal Gas was authorized to enlarge the capacity

¹ *Petal Gas Storage Co.*, 64 FERC ¶ 61,190 (1993). Salt dome storage caverns are created by injecting large volumes of water into subsurface geologic salt formations to dissolve the salt and pumping the brine fluids from the cavern.

² See *Petal Gas Storage Co.*, 86 FERC ¶ 61,224 (1999) (construction of Cavern No. 7); *Petal Gas*, 96 FERC ¶ 61,177 (2001) (minor design modification to Cavern Nos. 6 and 7), *Petal Gas Storage Co.*, 102 FERC ¶ 61,243 (2003) (conversion of brine storage cavern to natural gas service, now Cavern No. 3; construction of new Cavern No. 8);

(continued...)

of Cavern Nos. 6 and 7 from 5.2 billion cubic feet (Bcf) each to approximately 8 Bcf.³ In recent years, Petal Gas has constructed other new or expanded facilities.⁴

3. Petal Gas states that it has continued to expand its facilities in order to meet growing market demand for its services from existing and new customers. According to Petal Gas, the market demand has again increased such that an additional expansion is required. It explains that all of the storage capacity at Cavern Nos. 3, 6, 7 and 10 is fully subscribed, with only a small amount of remaining capacity associated with its development of Cavern No. 8, which will not go into service until the fall of 2008. Petal Gas avers that recent expressions of interest in more storage capacity reflect customers' concerns that the severe market dislocations stemming from hurricanes Katrina and Rita could reoccur, the fact that major new supply projects in the Gulf Coast region are anticipated to be in service by 2010, and an increase in overall market demand for multi-cycle, high deliverability firm storage services. It maintains that the growing market demand was demonstrated by a non-binding open season it held from July 11, 2007, to August 7, 2007, for potentially 5 Bcf more storage capacity. According to Petal Gas, 23

Petal Gas Storage Co., 118 FERC ¶ 61,253, *order on reh'g*, 120 FERC ¶ 61,226 (2007) (conversion of natural gas liquids storage cavern to natural gas service, now Cavern No. 9; construction of Cavern No. 10); and *Petal Gas Storage Co.*, 121 FERC ¶ 62,186 (2007) (abandonment of conversion of Cavern No. 9 because of communication with two other inactive brine caverns outside of Petal Gas' boundaries). Cavern No. 8, with a total capacity of 7.9 Bcf, 5.0 Bcf of working gas and 2.9 Bcf of cushion gas, is projected to be in service in November 2008, while the first phase of Cavern No. 10 went into service on August 25, 2007. Cavern No. 3 has a total capacity of 3.6 Bcf, with 2.4 Bcf of working gas and 1.2 Bcf of cushion gas, but Petal Gas is continuing to develop the cavern until it reaches its certificated capacity of 4.75 Bcf, with 3 Bcf of working gas and 1.75 Bcf of cushion gas.

³ *Petal Gas Storage, L.L.C.*, 90 FERC ¶ 61,243 (2000) (increase from 3 Bcf of working gas and 2.2 Bcf of cushion gas to 5 Bcf of working gas and 3 Bcf of cushion gas).

⁴ *Petal Gas Storage Co.*, 97 FERC ¶ 61,097 (2001) (59-mile pipeline interconnecting storage facilities to Southern Natural Gas Company), *Petal Gas Storage Co.*, 92 FERC ¶ 61,220 (2000) (new 5,000 hp compressor unit at the Petal No. 2 Compressor Station), *Petal Gas Storage Co.*, 110 FERC ¶ 61,260 (2005) (increasing operating pressure to expand mainline capacity from 700 MMcf per day (MMcf/d) to 1.3 Bcf per day (Bcf/d)), and *Petal Gas Storage Co.*, 119 FERC ¶ 61,227 (2007) (construction of the Petal No. 3 Compressor Station with 15,000 hp).

customers expressed interest in as much as 34 Bcf of storage capacity. Petal Gas is continuing to negotiate binding precedent agreements with the interested parties.

4. For the above reasons, in this proceeding Petal Gas is proposing what it designates as the Petal No. 3 Compressor Station Expansion and New Caverns project (Petal No. 3 Expansion) which will involve the construction of two new salt dome natural gas storage caverns and the expansion of its compressor facilities in Forrest County, Mississippi, as well as the construction and operation of related facilities. The Petal No. 3 Expansion project would increase Petal Gas' storage capacity by 19.4 Bcf, consisting of 10 Bcf of working gas and 9.4 Bcf of cushion gas (each cavern would have a capacity of 9.7 Bcf, consisting of 5 Bcf of working gas and 4.7 Bcf of cushion gas). Petal Gas anticipates that the proposed new capacity will be fully subscribed and that the majority of the prospective customers will require service by May 2010.

Proposal

Facilities

5. To accomplish this expansion of its system, Petal Gas proposes to:

- develop two new caverns, designated as Cavern No. 1, to be located immediately west of the Petal No. 3 Compressor Station, and Cavern No. 2, to be located south of the Petal No. 3 Compressor Station and the Mississippi Power Company (Mississippi Power) right-of-way;
- add three new compressor units, totaling 15,000 hp of compression, at the Petal No. 3 Compressor Station, which is still under construction;
- construct an additional control room, sized to meet future expansion, and related facilities to provide operational visibility for all Petal Gas compressor stations;
- construct an additional 2,535 feet of 16-inch diameter pipeline to interconnect the proposed new caverns with Petal Gas' existing facilities; and
- construct 24-inch diameter freshwater and brine pipelines, the length and location of which will be determined when Petal Gas determines which method of cavern development it will use, as discussed in more detail below.

6. Petal Gas indicates that like its other storage caverns, new Cavern Nos. 1 and 2 will be located within the Petal Salt Dome property owned by Petal Gas. It states that since the entire project will be located on land owned by the company no landowners will be affected. Petal Gas estimates that the new caverns can begin storage operations in May 2010.

7. Petal Gas will create Cavern Nos. 1 and 2 by solution mining or leaching, i.e., using liquid to dissolve the salt formation. Petal Gas hopes to be able to leach both caverns simultaneously, an approach that would involve fewer facilities and save time. However, no single leaching facility on the dome is capable of handling this approach. Therefore, unless Petal Gas' negotiations with multiple third-party operators of leaching facilities are successful, the caverns will have to be leached sequentially using the leaching facilities at Hattiesburg. Depending on whether the leaching is simultaneous or sequential, the routing of the freshwater and brine pipelines will vary. Consequently, Petal Gas has provided construction and engineering information on, as well as the environmental impacts associated with, both approaches and is requesting that the Commission approve the use of both.

8. As noted, the Petal No. 3 Expansion project will also involve the construction of natural gas pipeline laterals to connect the new caverns to Petal Gas' existing system. These facilities will include one 16-inch diameter, 1,390-foot long natural gas transfer line to connect Cavern No. 1 to the Petal No. 2 Compressor Station, and a 16-inch diameter, 1,145-foot transfer line to connect Cavern No. 2 to a valve located between the existing Petal Cavern Nos. 6 and 7. Additionally, Petal Gas indicates that one new brine line and one new freshwater line, each consisting of 24-inch diameter, 1,979-foot long pipe, will be required to connect Cavern No. 1 to the existing Hattiesburg leaching facilities. Alternatively, if the caverns are developed sequentially, then 24-inch diameter, 585-foot long brine and freshwater pipelines will have to be constructed to connect Cavern No. 2 to the proposed leaching lines at Cavern No. 1. These lines, if necessary, will be installed under the Mississippi Power right-of-way using directional drilling to avoid gopher tortoise burrows located within the right-of-way.

9. Petal Gas also proposes to install three new, 5,000 hp, bi-directional, electric-driven compressor units within the Petal No. 3 Compressor Station building, which was authorized in a previous proceeding and was still under construction at the time the application for this project was filed. Petal Gas notes that additional noise abatement material was included in the construction of the building to accommodate the expansion of the compressor station. Other related above-ground facilities associated with the compressor units include an interstage/after cooler, interstage scrubber, additional hydration equipment, a hot oil pump, a withdrawal heater, and a control room. Petal Gas states that the compressor station will be accessed by the existing permanent access road so no temporary access roads will be required.⁵

⁵ Petal Gas explains that the Petal No. 3 Expansion project will require Mississippi Power to modify an electrical substation located adjacent to the Petal No. 2 Compressor Station to supply additional electricity for the new compressor units. Petal Gas indicates that this modification is non-jurisdictional.

Rates

10. Petal Gas requests authority to charge market-based rates for service on the Petal No. 3 Expansion. Petal Gas explains that in previous proceedings, the Commission approved its similar proposals to charge market-based rates for storage services. Petal Gas indicates that in the order approving its most recent expansion in 2007 (2007 Expansion project), the Commission found that Petal Gas' market share of existing natural gas storage in the Gulf Coast region was 4.1 percent and 11.6 percent for working gas capacity and maximum deliverability, respectively, with corresponding Herfindahl Hirschman Index (HHI) calculations for that region of 757 and 666.⁶

11. Petal Gas asserts that its market share, even with the capacity added as a result of the Petal No. 3 Expansion project, will be below the levels found to be acceptable in the 2007 Expansion project.⁷ Specifically, Petal Gas avers that its market share will now be 4.4 percent for working gas capacity and 11.4 percent for maximum deliverability. It states that the HHI calculations for the Gulf Coast region will be 608 for working gas and 569 for deliverability, which are below the Commission's benchmark of 1,800. Further, Petal Gas explains that its customers have many options for storage service and that it will face competition from other companies that provide storage service and from the capacity release market for storage services, as well as from various alternatives to storage such as LNG, propane air facilities, seasonal and swing contracts, balancing and no-notice service.⁸ Petal Gas also notes that although it does not have binding precedent agreements with potential customers, if the Commission approves its request to charge market-based rates, it will be at risk for any under-recovered costs associated with the project.

⁶ *Petal Gas Storage, L.L.C.*, 118 FERC ¶ 61,253, at P 33 (2007).

⁷ *Id.* P 33 and P 34. Petal Gas indicates that the market-share analysis in the Prepared Direct Testimony of Mr. Kenneth Beckman, President of International Gas Consulting, included in Exhibit Z-1 to the application, supports its conclusion that the current project will not result in a significant change in its market power.

⁸ Based on its position that it will not be able to exercise market power and should be allowed to continue charging market-based rates, Petal Gas requests a waiver of the Commission's regulations requiring the submission of cost data. Accordingly, Petal Gas did not include Exhibits K, L, N and O to the application.

12. Petal Gas states that its proposal is consistent with the Commission's Certificate Policy Statement⁹ because if its request to charge market-based rates is approved, existing customers cannot subsidize the project. Further, it avers that the project will have no adverse effects on existing customers, competing pipelines or landowners. Petal Gas asserts that to the extent there would be any minimal, adverse impacts, the public benefits flowing from the project would outweigh such impacts.

Interventions

13. Notice of Petal Gas' application was published in the *Federal Register* on February 11, 2008 (73 Fed. Reg. 9115). No interventions, notices of intervention or protests were filed.

Discussion

14. The Petal No. 3 Expansion project will consist of facilities that will be used to transport gas in interstate commerce; therefore, the proposed facilities will be subject to the Natural Gas Act and the Commission's jurisdiction.

A. Certificate Policy Statement

15. The Commission's September 15, 1999 Certificate Policy Statement provides guidance as to how it will evaluate proposals for certificating new construction.¹⁰ The Certificate Policy Statement established criteria for determining whether there is a need for a proposed project and whether the proposed project will serve the public interest. The Certificate Policy Statement explains that in deciding whether to authorize the construction of major new pipeline facilities, the Commission balances the public benefits against the potential adverse consequences. The goal is to give appropriate consideration to the enhancement of competitive transportation alternatives, the possibility of overbuilding, subsidization by existing customers, the applicant's responsibility for unsubscribed capacity, and the avoidance of the unnecessary exercise of eminent domain or other disruptions of the environment.

16. Under this policy, the threshold requirement for pipelines proposing new projects is that the pipeline must be prepared to financially support the project without relying on subsidization from its existing customers. The next step is to determine whether the applicant has made efforts to eliminate or minimize any adverse effects the project might

⁹ *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227 (1999), *order on clarification*, 90 FERC ¶ 61,128, *order on clarification*, 92 FERC ¶ 61,094 (2000) (Certificate Policy Statement).

¹⁰ *Id.*

have on the applicant's existing customers, existing pipelines in the market and their captive customers, or landowners and communities affected by the route of the new pipeline or location of the facility. If residual adverse effects on these interest groups are identified after efforts have been made to minimize them, the Commission will evaluate the project by balancing the evidence of public benefits to be achieved against the residual adverse effects. This is essentially an economic test. Only when the benefits outweigh the adverse effects on economic interests will we proceed to complete the environmental analysis where other interests are considered.

17. The Commission finds that Petal Gas has met the threshold requirement of the Certificate Policy Statement that existing customers not subsidize the costs of a new project. This will be the case because all of Petal Gas' existing customers receive storage service under contracts at market-based rates and these contracts will not change as a result of the Petal No. 3 Expansion. Thus, such existing customers will continue to pay rates that will not be increased to include or roll in the costs of the proposed project. Further, as discussed below, the Commission is approving Petal Gas' request to charge customers on the proposed expansion project market-based rates; therefore, Petal Gas will assume the economic risks associated with the project's costs to the extent that any capacity is unsubscribed.

18. The Commission also finds that the Petal No. 3 Expansion project will have no adverse impact on Petal Gas' existing customers' service. Similarly, the proposed project will not adversely affect existing pipelines or natural gas storage providers in the market or their captive customers since the project will help meet a currently unserved market demand for storage. We also note that no storage company in Petal Gas' market area filed a protest in this proceeding. Additionally, the new storage facilities should benefit the public by improving the flexibility and reliability of storage service provided by Petal Gas, as well as by supporting efficient natural gas service in the Southeast.

19. With respect to the effect the project might have on nearby landowners in the area, we find that there will be few, if any, adverse impacts on such landowners, primarily because no new rights-of-way will be required. As explained, all of the construction related to the Petal No. 3 Expansion project will occur on property owned by Petal Gas. Petal Gas has also demonstrated that there is substantial interest in the proposed new storage capacity on the part of potential customers, as evidenced by the response to Petal Gas' open season. Thus, we find there will be a market for the Petal No. 3 Expansion project.¹¹ For all of the reasons stated, the Commission finds that the Petal No. 3

¹¹ However, as Petal Gas did not rely on the existence of precedent agreements to demonstrate the need for its proposal, we will not require it to execute agreements for service equal to the levels of subscribed capacity under any precedent agreements prior to

(continued...)

Expansion project is required by the public convenience and necessity. The project will meet new market demand, will not be subsidized by existing customers, and will not result in significant burdens on the environment or landowners.

B. Market-Based Rates

20. As noted, Petal Gas seeks authority to provide the storage services associated with the Petal No. 3 Expansion at market-based rates. While the Commission previously granted Petal Gas' requests to charge market-based rates for similar services, that authorization was expressly subject to reexamination if: (1) Petal Gas expands its storage capacity beyond the level authorized; (2) an affiliate increases storage capacity; (3) an affiliate links storage facilities to Petal Gas; or, (4) Petal Gas, or an affiliate, acquires an interest in, or is acquired by, an interstate pipeline connected to Petal Gas.¹² We required Petal Gas to notify the Commission within 10 days of any such change in circumstances that may alter its market-power status.¹³ Accordingly, in its application in this proceeding, Petal Gas submitted a market analysis showing that expansion of its storage facilities will not affect the Commission's previous determination that Petal Gas lacks significant market power in providing storage services.

21. The Commission has approved market-based rates for storage services where applicants have demonstrated under the criteria in the Commission's Alternative Rate Policy Statement¹⁴ that the pipelines providing the storage services lack significant market power or have adopted measures that significantly mitigate market power. In prior orders, the Commission has approved requests to charge market-based rates for storage services based on findings that proposed projects could not exercise market

commencing service. *See Petal Gas Storage Co.*, 120 FERC ¶ 61,226 (2007) (order on rehearing of certificate order in Docket No. CP07-30-000).

¹² *Petal Gas Storage Co.*, 118 FERC ¶ 61,253 at P 38 (2007).

¹³ *Id.*

¹⁴ *Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines and Regulation of Negotiated Transportation Services of Natural Gas Pipelines*, 74 FERC ¶ 61,076 (1996), *reh'g and clarification denied*, 75 FERC ¶ 61,024 (1996), *petitions for review denied and dismissed*, *Burlington Resources Oil & Gas Co. v. FERC*, 172 F. 3d 918 (D.C. Cir. 1998), *criteria modified*, *Rate Regulation of Certain Natural Gas Storage Facilities*, Order No. 678, FERC Stats. & Regs. ¶ 31,220 (2006), *order on clarification and reh'g*, Order No. 678-A, 117 FERC ¶ 61,190 (2006) (Alternative Rate Policy Statement).

power due to the small size of the projects, the applicants' anticipated shares of the market being small, and the existence of numerous competitors in the relevant market area.¹⁵

22. Petal Gas filed, as Exhibit Z1 to its January 31, 2008 application, an updated market-power analysis based on the traditional criteria established in the Alternative Rate Policy Statement.¹⁶ That analysis defines the relevant product and geographic markets as the Gulf Coast Market, measures market share and concentration, looks at changes that have occurred since the original analysis, and evaluates other factors. The analysis demonstrates that Petal Gas will face competition from other companies offering storage services, as well as from the capacity release market for storage. In addition the analysis finds that storage customers have various competing alternatives, such as LNG, propane air facilities, seasonal and swing contracts, and balancing or no-notice services. The market-power analysis shows that the storage facilities in the Gulf Coast geographic market have a total working gas capacity of 944.120 Bcf, including Petal Gas' current capacity and the 10 Bf of storage capacity that will result from the proposal in this proceeding. Of the total capacity in the relevant market, Petal Gas controls 4.4 percent of the working gas capacity and its share of deliverability is 11.4 percent. The market-power analysis also shows that over 40 other gas storage facilities in the Gulf Coast market are planned, have been approved, or are under construction for a total of an additional 285.400 Bcf of working gas capacity.

23. The Commission uses the HHI test to determine market concentration for gas pipeline and storage markets. The Alternative Rate Policy Statement explains that a low HHI, generally less than 1,800, indicates that sellers cannot exert market power because customers have sufficiently diverse alternatives in the relevant market. While a low HHI suggests a lack of market power, a high HHI, generally greater than 1,800, requires closer scrutiny to determine a seller's ability to exert market power. Petal Gas' market power analysis, which includes the proposed expansion capacity, shows an HHI of 608 for working gas capacity and 569 for peak day deliverability. Therefore, these measures of market concentration are well below the Commission's threshold level of 1,800, indicating that Petal Gas does not have market power in the relevant market area.

24. In view of these considerations, the Commission finds that Petal Gas may continue to charge market-based rates for its storage services, including the additional services that are the subject of this proceeding. However, consistent with the Commission's finding in the 2007 Expansion project, we will condition this finding on a requirement that Petal

¹⁵ See, e.g., *Port Barre Investments, L.L.C. d/b/a Bobcat Gas Storage*, 116 FERC ¶ 61,052 (2006); *Pine Prairie Energy Center, LLC*, 109 FERC ¶ 61,215 (2004); and *Egan Hub Partners, L.P.*, 99 FERC ¶ 61,269 (2002).

¹⁶ See *supra* note 7.

Gas notify the Commission of future circumstances that may significantly affect its market-power status.¹⁷ Thus, our approval of continued market-based rate authority is subject to re-examination if: (1) Petal Gas expands its storage capacity beyond the level authorized in this proceeding; (2) an affiliate increases storage capacity; (3) an affiliate links storage facilities to Petal Gas; or (4) Petal Gas, or an affiliate, acquires an interest in, or is acquired by, an interstate pipeline connected to Petal Gas. Accordingly, Petal Gas shall notify the Commission within 10 days of any such change in circumstances that may alter Petal Gas' market-power status.¹⁸ The notification shall include a detailed description of the new facilities and their relationship to Petal Gas' operations.

C. Requests for Waivers

25. The Commission will grant Petal Gas' request for waiver of section 157.14(a) of the Commission's regulations requiring it to submit Exhibit K (Cost of Facilities), Exhibit L (Financing), Exhibit N (Revenues, Expenses, and Income), and Exhibit O (Depreciation and Depletion) as a part of its certificate application to support cost-based rates. We have previously waived these requirements for Petal Gas when we approved its proposals to charge market-based rates, as we are doing in this proceeding, because the information in these exhibits is not relevant where there is not a need to calculate cost-based rates.¹⁹ The Commission will also waive section 157.6(b)(8) requiring the filing of detailed cost-based data, section 284.7(e) requiring a pipeline to charge reservation charges and to utilize the straight fixed-variable rate design, Part 201's accounting and annual reporting requirements and sections 260.1 and 260.2 (Form Nos. 2 and 2-A), respectively, of the Commission's regulations because these requirements are also inapplicable when market-based rates are charged. However, these waivers do not extend to the information on pages 520 and 520a of Form No. 2-A, relating to gas volumes, because this data is necessary for the Commission's assessment of annual charges.²⁰ Further, the Commission will grant a waiver of section 157.14(a)(10) requiring the submission of gas supply data, since such information does not apply to storage operations.

¹⁷ *Petal Gas Storage Co.*, 118 FERC ¶ 61,253, at P 36 (2007). *See also, Copiah County Storage Co.*, 99 FERC ¶ 61,316 (2002); *Egan Hub*, 99 FERC ¶ 61,269 (2002).

¹⁸ *Petal Gas Storage Co.*, 118 FERC ¶ 61,253, at P 36 (2007).

¹⁹ *Id.* P 39.

²⁰ *See, e.g., Dominion Cove Point LNG, LP*, 115 FERC ¶ 61,337, at P 147 (2006) (storage provider required to pay Annual Charge Adjustment on the volumes transported or delivered).

26. However, the above waivers are subject to review in the event that Petal Gas' market power or market-based rates require reexamination. The Commission's granting of these waivers is also conditioned upon Petal Gas' maintaining sufficient records of cost and revenue data consistent with the Uniform System of Accounts so that it will be available if the Commission requires Petal Gas to produce this information in the future.

D. Engineering

27. The Petal Salt Dome is an elliptical intrusion of Louann Salt, approximately 3 miles in diameter, located in Forrest County, Mississippi, approximately 5 miles northeast of Hattiesburg. The top of the salt is at a depth of 1,400 feet with approximately 200 feet of anhydrite as the caprock, and the salt extends to a depth greater than 6,000 feet. Over 20 caverns, including PetalGas' five existing caverns, have been constructed in the dome.

28. Each of Petal Gas' proposed caverns (Cavern No. 1 and Cavern No. 2) are designed to be 250 feet in diameter and 1,450 feet in length, and have a total capacity of 9.7 Bcf. The tops of the caverns are at approximately 4,200 feet. There are approximately 416 feet between Cavern No.1 and its closest neighboring cavern; 612 feet between Cavern No. 2 and its closet neighbor; and at least 1,500 feet between both caverns and the edge of the salt. In addition, there are 2,000 feet between the tops of the caverns and the top of the salt. The maximum pressure for each cavern is 3,200 psig at the wellhead (3,415 psia bottomhole) and the minimum pressure is 1,100 psig. The maximum daily designed withdrawal rate is 500 MMcf/d and the injection rate is 250 MMcf/d.

29. Commission engineering staff evaluated the data submitted in Petal Gas' application and concluded that its proposal is technically sound and feasible. The project cavern locations are well within the design criteria and confinement of the salt dome and the caverns are located at sufficient depth and within proper distances from both other caverns and salt boundaries to avoid pressure influences between caverns when they are operated at full storage capacity/pressure. The caverns are properly spaced under Mississippi State Oil and Gas Board (MSOGB) regulations for domal salt storage facilities; the wells are designed properly; and the various tests and logs to be run on these caverns and wells are required by the MSOGB and consistent with Interstate Oil and Gas Compact Commission (IOGCC) guidelines for salt dome storage. Finally, the maximum and minimum cavern pressure gradients throughout the storage cycle (0.90 psi/ft and 0.2 psi/ft) have been chosen to preserve the structural integrity of the caverns, and are within the limits recommended by the IOGCC. The additional 15,000 hp of compression is sufficient to inject the additional gas. The total inventory of the facility will be 51.5 Bcf, with a total working gas capacity of 30.20 Bcf and a total withdrawal capability of 3,065 MMcf/d. Certain engineering conditions with which Petal Gas must comply are set out in Appendix A to this order.

E. Environmental Review

30. On March 13, 2008, a Notice of Intent to Prepare an Environmental Assessment for the Proposed Petal No. 3 Compressor Station project and Request for Comments on Environmental Issues (NOI) was issued. The NOI was mailed to about 200 interested parties, including federal, state, and local officials; agency representatives; conservation organizations; Native American groups; local libraries and newspapers; and landowners in the vicinity of the proposed project. No comments were received in response to the NOI.

31. Commission environmental staff prepared an environmental assessment (EA) for Petal Gas' proposal and placed it in the public record on May 12, 2008. The EA addresses geology and soils, vegetation and wildlife, threatened and endangered species, cultural resources, land use, air and noise quality, safety, and alternatives. Based on the discussion in the EA, the Commission concludes that if constructed and operated in accordance with Petal Gas' application and mitigation measures set out in Appendix B to this order, our approval of this proposal would not constitute a major federal action significantly affecting the quality of the human environment.

32. We note that any state or local permits issued with respect to the jurisdictional facilities authorized herein must be consistent with the conditions of this certificate. The Commission encourages cooperation between interstate pipelines and local authorities. However, this does not mean that state and local agencies, through application of state or local laws, may prohibit or unreasonably delay the construction or operation of facilities approved by this Commission.²¹ Petal Gas shall notify the Commission's environmental staff by telephone or facsimile of any environmental noncompliance identified by other federal, state, or local agencies on the same day that such agency notifies Petal Gas. Petal Gas shall file written confirmation of such notification with the Secretary of the Commission within 24 hours.

Conclusion

33. For all of the reasons discussed above, the Commission concludes that the Petal No. 3 Expansion project is required by the public convenience and necessity and authorizes Petal Gas to undertake the construction and operation of the project facilities, subject to the discussion herein, the engineering and environmental conditions set forth in the Appendices, and the ordering paragraphs to this order. At a hearing held on July 17,

²¹See, 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.*, 52 FERC ¶ 61,091 (1990) and 59 FERC ¶ 61,094 (1992).

2008, the Commission on its own motion, received and made a part of the record in this proceeding all evidence, including the application and exhibits thereto, submitted in support of the authorizations sought herein, and upon consideration of the record,

The Commission orders:

(A) Petal Gas is issued a certificate authorizing it to construct and operate the facilities that are part of the Petal No. 3 Expansion project, as more particularly described herein.

(B) The authorization issued in Ordering Paragraph (A) is conditioned on Petal Gas' compliance with all applicable Commission regulations under the Natural Gas Act, particularly those set forth in Part 154 and Part 284, and paragraphs (a), (c), (e) and (f) of section 157.20.

(C) Pursuant to section 157.20(b) of the Commission's regulations, the facilities authorized in Ordering Paragraph (A) must be constructed and placed in service within one year of the date of this order.

(D) The authorization issued in Ordering Paragraph (A) is conditioned upon Petal Gas' compliance with the engineering and environmental conditions set forth in Appendices A and B, respectively, of this order.

(E) Petal Gas' request for authorization to charge market-based storage rates for firm and interruptible storage service is granted, as discussed herein, and is conditioned on a reexamination of Petal Gas' market power and market-based storage rate authority in the event that: (1) Petal expands its storage capacity beyond the amount authorized in this proceeding; (2) an affiliate increases storage capacity; (3) an affiliate links storage facilities to Petal Gas; or (4) Petal Gas, or an affiliate, acquires an interest in, or is acquired by, an interstate pipeline connected to Petal Gas. Petal Gas shall notify the Commission within 10 days of any such change in circumstances that may alter Petal Gas' market-power status.

(F) Petal Gas' request for waiver of Commissions regulations that have been deemed inapplicable to storage providers with market-based rates is granted, as discussed more particularly in this order.

(G) Petal Gas shall notify the Commission's environmental staff by telephone, e-mail and/or facsimile of any environmental noncompliance identified by other federal, state, or local agencies on the same day that such agency notifies Petal Gas, and Petal Gas shall file written confirmation of such notification with the Secretary of the Commission within 24 hours.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.

APPENDIX A
Engineering Conditions

1. Petal shall establish and maintain a subsidence monitoring network over the proposed cavern storage area.
2. Petal shall assemble, test and maintain an emergency shutdown system.
3. Petal shall periodically log each cavern's well to check the status of each casing string.
4. Petal shall conduct sonar surveys or tests of the caverns every five years to:
(a) monitor their dimensions and shape, including the cavern roof, (b) estimate pillar thickness between caverns throughout the storage operations, and (c) file the results with the Commission.

In the alternative, no less than 30 days before placing the caverns into service, Petal may file with the Commission, for prior approval of the methodology, a detailed cavern integrity monitoring plan that is consistent with the intent of the sonar survey.

5. Petal shall conduct an annual inventory verification study on each cavern.
6. Petal shall determine and report to the Secretary of the Commission the final gas storage capacity of each cavern (including data and work papers to support the actual operating capacity determination).
7. The following conditions shall apply to the storage caverns:
 - a. The total maximum gas storage inventory stored in Petal shall not exceed 51.5 Bcf at 14.73 psia and 60°F without prior Commission authorization.
 - b. The maximum gas storage shut-in stabilized pressure in each cavern shall not exceed 0.90 psi per foot of cavern depth and the minimum pressure in each cavern shall be limited to 0.20 psi per foot of cavern depth.
8. Before commencing gas storage operations in any of the caverns, Petal shall file with Secretary of the Commission:
 - a. the results of the MIT for each cavern before conversion of that cavern to natural gas storage;

- b. The results of any sonar surveys of each cavern, including plan view and cross-sections;
 - c. copies of the latest interference, tracer surveys, or other testing or analysis, to verify the lack of communication between the caverns;
 - d. the volume of rubble at the base of each cavern, including the methodology for determining such volume; and
 - e. geological cross sections (when additional data is obtained) through the total project area showing all geologic units.
9. Petal shall file semiannual reports for each cavern (to coincide with the termination of the injection or withdrawal cycles) containing the following information (volumes shall be stated at 14.73 psia and 60°F):
 - a. the daily volume of natural gas injected and withdrawn;
 - b. the inventory of natural gas and shut-in wellhead pressure for each cavern at the end of reporting period;
 - c. the maximum daily injection and withdrawal rates experienced for the entire storage field during the reporting period;
 - d. the average working pressure on such maximum days taken at a central measuring point where the total volume injected or withdrawn is measured;
 - e. the results of any tests performed to determine the actual size, configuration or dimensions of the storage caverns;
 - f. a discussion of current operating problems and conclusions;
 - g. other data or reports which may aid the Commission in the evaluation of the storage project; and
 - h. the results of leak detection tests performed during storage operations to determine the integrity of each cavern/wellbore, casing and wellhead.
10. Petal shall file semiannual reports in accordance with section 157.214 (c) of the Commission's regulations until the maximum inventory reaches or closely approximates the maximum capacity authorized and for a period of one year following.

APPENDIX B
Environmental Mitigation Measures

1. Petal Gas Storage, L.L.C. (Petal Gas) shall follow the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests) and as identified in the Environmental Assessment (EA), unless modified by the Commission Order. Petal Gas must:
 - a. request any modification to these procedures, measures, or conditions in a filing with the Secretary of the Commission (Secretary);
 - b. justify each modification relative to site-specific conditions;
 - c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and
 - d. receive approval in writing from the Director of Office of Energy Projects (OEP) **before using that modification.**

2. The Director of OEP has delegated authority to take whatever steps are necessary to ensure the protection of all environmental resources during construction and operation of the project. This authority shall allow:
 - a. the modification of conditions of the Commission Order; and
 - b. the design and implementation of any additional measures deemed necessary (including stop-work authority) to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impact resulting from project construction and operation.

3. **Prior to any construction**, Petal Gas shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, Environmental Inspectors (EIs), and contractor personnel will be informed of the EIs' authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities.

4. The authorized facility locations shall be as shown in the EA, as supplemented by filed alignment sheets. **As soon as they are available, and before the start of construction**, Petal Gas shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by the Commission Order. All requests for modifications of environmental conditions of the Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

Petal Gas' exercise of eminent domain authority granted under Natural Gas Act (NGA) section 7(h) in any condemnation proceedings related to the Order must be consistent with these authorized facilities and locations. Petal Gas' right of eminent domain granted under NGA section 7(h) does not authorize it to increase the size of its natural gas storage facilities to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

5. Petal Gas shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations, and staging areas, pipe storage yards, new access roads, and other areas that would be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. Each area must be approved in writing by the Director of OEP **before construction in or near that area.**

This requirement does not apply to extra workspace allowed by the Upland Erosion Control, Revegetation, and Maintenance Plan and/or minor field realignments per property owner needs and requirements which do not affect other property owners or sensitive environmental areas such as wetlands.

Examples of alterations requiring approval include all route realignments and facility location changes resulting from:

- a. implementation of cultural resources mitigation measures;
 - b. implementation of endangered, threatened, or special concern species mitigation measures;
 - c. recommendations by state regulatory authorities; and
 - d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.
6. Petal Gas shall not begin construction of the Petal No. 3 Compressor Station Expansion and New Caverns project until:
 - a. the OEP staff completes any necessary consultation with the U.S. Fish and Wildlife Service; and

- b. Petal Gas has received written notification from the Director of OEP that construction and/or use of mitigation (including implementation of conservation measures) may begin.
7. Petal Gas shall make all reasonable efforts to assure its predicted noise levels from the modifications at the Petal No. 3 Compressor Station are not exceeded at nearby noise-sensitive areas (NSAs) and file noise surveys showing this with the Secretary no later than 60 days after placing the compressor station in service. However, if the noise attributable to the operation of the Petal No. 3 Compressor Station at full load exceeds a day-night sound level of 55 decibels at any nearby NSAs, Petal Gas shall file a report on what changes are needed and shall install additional noise controls to meet the level within 1 year of the in-service date. Petal Gas should confirm compliance with this requirement by filing a second noise survey with the Secretary no later than 60 days after it installs the additional noise controls.