

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

Petal Gas Storage, L.L.C.

Docket No. CP07-30-000

ORDER ISSUING CERTIFICATE

(Issued March 28, 2007)

1. On December 4, 2006, Petal Gas Storage, L.L.C. (Petal) filed an application under section 7(c) of the Natural Gas Act (NGA) for a certificate of public convenience and necessity to convert two existing salt dome caverns in Forrest County, Mississippi into natural gas storage caverns and to construct approximately one-half mile of pipeline facilities to connect the converted caverns to the existing Petal natural gas storage operations located east of Hattiesburg, Mississippi. The proposed project, known as the Cavern Conversions Project, will increase the overall storage capacity of Petal's storage complex by 4.45 Bcf (2.85 Bcf of working gas and 1.6 Bcf of cushion gas). Petal also seeks authority to charge market-based rates for its storage services using the proposed expansion capacity and requests waiver of those parts of the Commission's regulations requiring the submission of cost data.

2. As discussed below, the Commission finds that the construction and operation of Petal's proposed Cavern Conversions Project are required by the public convenience and necessity, and issues Petal the requested certificate authorization, subject to conditions. The Commission also grants Petal's request to charge market-based rates for its expansion storage services.

I. Background

3. Petal is a Delaware limited liability company with its principal place of business in Forrest County, Mississippi. Petal is a wholly-owned subsidiary of Enterprise Products Partners, L.P., based in Houston, Texas.¹ Petal is a natural gas company within the

¹ Enterprise Products Partners, L.P., through its merger with GulfTerra Energy Partners, L.P., acquired Petal on October 1, 2004.

meaning of the NGA, and is engaged in the storage and transportation of natural gas for others in interstate commerce.

4. On August 4, 1993, the Commission authorized Petal to construct and operate its first salt dome natural gas storage cavern, Cavern No. 6, located on the Petal Salt Dome in Forrest County, Mississippi.² As outlined below, in a series of subsequent orders, the Commission authorized the construction of additional storage caverns, the expansion of caverns' storage capacity, and the construction and expansion of various storage header and mainline facilities, including compression and interconnection facilities. In these orders, the Commission authorized Petal to charge market-based rates for its storage services and cost-based rates for its open-access transportation services.

5. In March 1999, the Commission authorized Petal to construct its second salt dome natural gas storage cavern, Cavern No. 7, adjacent to Cavern No. 6 on the Petal Salt Dome.³ In February 2000, the Commission approved Petal's application to enlarge the capacity of each of these caverns from 5.2 Bcf (3 Bcf working gas) to approximately 8 Bcf (5 Bcf working gas).⁴ In addition, in September 2000, the Commission authorized Petal to add compression at the Petal storage facility (Petal No. 2 Compressor Station), install a 5.5 mile loop of its storage header, and enlarge an existing interconnection with Tennessee Gas Pipeline Company.⁵ Further, in October 2001, the Commission approved Petal's application to construct, own, and operate a 59-mile pipeline (Line 100) commencing at the terminus of Petal's storage header facility and terminating adjacent to Southern Natural Gas Company's compressor station near Enterprise, Mississippi.⁶

6. In February 2003, the Commission authorized Petal to develop a third and fourth natural gas storage cavern. Specifically, the Commission approved Petal's application to convert an existing brine storage cavern, Cavern No. 3, to a natural gas storage cavern, to construct and operate a new natural gas storage cavern, Cavern No. 8, and to install a new 5,000 horsepower compressor unit at the Petal No. 2 Compressor Station.⁷ Cavern No. 3

² *Petal Gas Storage Company*, 64 FERC ¶ 61,190 (1993).

³ *Petal Gas Storage Company*, 86 FERC ¶ 61,224 (1999).

⁴ *Petal Gas Storage, L.L.C.*, 90 FERC ¶ 61,243 (2000).

⁵ *Petal Gas Storage, L.L.C.*, 92 FERC ¶ 61,220 (2000).

⁶ *Petal Gas Storage, L.L.C.*, 97 FERC ¶ 61,097 (2001).

⁷ *Petal Gas Storage, L.L.C.*, 102 FERC ¶ 61,243 (2003).

and the new compressor unit were placed in service on December 1, 2005. When fully developed, Cavern No. 3 will have capacity of 4.75 Bcf, including 3 Bcf of working gas and 1.75 Bcf of cushion gas. Cavern No. 8 is projected to be in service in April 2008, with a total capacity of 7.9 Bcf, which will consist of 5.0 Bcf of working gas and 2.9 Bcf of cushion gas.

7. Finally, in March 2005, the Commission authorized Petal to up-rate certain compressor units and increase the operating pressure of its storage header in order to increase the capacity of its 59-mile mainline pipeline, Line 100, from 700 MMcf per day to 1.3 Bcf per day.⁸

8. Petal states that the demand for storage service has continued to increase since Petal's last expansion, and it therefore has developed the proposed Cavern Conversions Project.

II. The Proposal

A. Facilities

9. As stated, the Cavern Conversions Project involves the conversion of two existing salt dome caverns into natural gas storage caverns and the construction of related pipeline facilities to connect the converted caverns to Petal's existing storage facility. One of the caverns (Cavern No. 9) has been used to store natural gas liquids (NGL). The other cavern (Cavern No. 10) has been used for brine storage. Conversion of the caverns for natural gas storage will require a workover of the existing wells to install a new well bore casing, while existing facility control structures and subsurface electrical lines, used for NGL and brine operations, will be modified to house fiber optics cable and equipment for remote control of the natural gas wellhead and appurtenant facilities.

10. Cavern Nos. 9 and 10 are located within the Petal Salt Dome, a subsurface geologic salt formation underlying the property owned by Petal for its existing natural gas storage operations. All of the proposed natural gas storage facilities will be located within Petal's property boundaries. The temporary construction workspace required for the project will be located primarily on the commercial/industrial portions of the property. Preexisting facility roads will be used as access roads and no modifications to the existing access roads are necessary.

⁸ *Petal Gas Storage, L.L.C.*, 110 FERC ¶ 61,260 (2005).

11. The Petal Cavern Conversions Project will increase the overall storage capacity of Petal's storage complex by 4.45 Bcf (2.85 Bcf of working gas and 1.6 Bcf of cushion gas). Petal states that it expects to convert Cavern Nos. 9 and 10 simultaneously, using separate drilling rigs, and anticipates in-service date of July 2007 for both caverns.

12. Petal proposes to operate Cavern No. 9, the preexisting NGL cavern, through a single 6-inch-diameter natural gas transfer line, 2,055 feet long, to connect Cavern No. 9 to Cavern No. 8. Cavern No. 9 has a proposed total capacity of 1.0 Bcf, of which 0.65 Bcf is working gas and 0.35 Bcf is cushion gas.

13. Cavern No. 10, the preexisting brine storage cavern, will be connected to Cavern No. 7 through a parallel 12-inch-diameter natural gas transfer line and an 8-inch-diameter brine line,⁹ each amounting to 480 feet and located in the same right-of-way. Petal proposes to develop Cavern No. 10 in two phases. The first phase will involve a workover of the well bore and the dewatering of the existing cavern and is anticipated to be completed and placed in service prior to July 2007. The capacity of Cavern No. 10 after the first phase of development will be 2.7 Bcf, of which 1.7 Bcf will be working gas and 1.0 Bcf will be cushion gas. The second phase of Cavern No. 10's development will involve expanding the existing cavern by 0.75 Bcf through additional leaching of the cavern over a five-year period. Once the second phase development is complete, the cavern will reach its maximum capacity of 3.45 Bcf, of which 2.2 Bcf will be working gas and 1.25 Bcf will be cushion gas.

14. In addition, the aboveground facilities associated with the Cavern Conversions Project consist of two wellheads and the preexisting NGL and brine control structures for the remote operations of the proposed wellhead facilities. Petal states that the construction and operation area for the proposed wellheads will consist of the two-acre area surrounding the wellheads, which is currently gravel and stone pads and can be used for construction equipment and the workover drilling rig to convert the caverns, and for wellhead operations once the caverns have been converted.

⁹ Petal states that the 8-inch brine line, a non-jurisdictional facility, will provide it with the added flexibility to use its affiliate, Enterprise NGL's brine infrastructure for the future maintenance and/or expansion of Cavern Nos. 6 and 7, as well as Cavern No. 10. The existing Enterprise NGL brine infrastructure currently connected to Cavern No. 10 will be used to dewater the cavern during the conversion process.

B. Rates and Services

15. Petal proposes to provide firm and interruptible open-access storage services through the Cavern Conversions Project facilities under its existing storage Rate Schedules FSS and ISS. Petal proposes no changes to the services provided under these rate schedules or to its currently effective FERC Gas Tariff.

16. Petal currently provides storage services using its existing storage facilities pursuant to market-based rates, as authorized by the Commission in Docket Nos. CP93-69-000, CP99-25-000, CP99-614-000, and CP02-387-000.¹⁰ Accordingly, Petal requests authority in this case also to charge market-based rates for the additional storage services that will be provided by the expanded storage facilities of the Cavern Conversions Project. Petal supports its request with a market power analysis at Exhibit Z-1 to its application that concludes that sufficient alternatives to Petal's storage service exist, such that Petal will be unable to exercise any market power.

17. Because Petal seeks market-based rate authority for its expanded services, Petal requests waiver of those portions of the Commission's regulations requiring the submission of cost data. Accordingly, Petal omitted from its application, detailed cost data and revenue projections and Exhibits K, L, N, and O required by section 157.14 of the regulations.

C. Need for the Project

18. Petal states that its storage service is currently fully subscribed on a firm basis at Cavern Nos. 3, 6 and 7. Petal asserts that although it currently has unsubscribed firm capacity in connection with its development of Cavern No. 8, that cavern is not expected to be placed in service until the spring of 2008. Petal maintains that it regularly receives strong expressions of interest concerning the availability of firm storage capacity prior to 2008. Petal states that such interest is likely attributable to several factors, including: (1) concern regarding the market dislocations created by hurricanes Katrina and Rita; (2) the impact of major, new pipeline and LNG supply projects in the Gulf Coast region anticipated to be placed in service prior to 2008; and (3) an overall increase in market demand for multi-cycle, high-deliverability firm storage services.

¹⁰ See *Petal Gas Storage Co.*, 64 FERC ¶ 61,190 (1993); *Petal Gas Storage Co.*, 86 FERC ¶ 61,224 (1999); *Petal Gas Storage, L.L.C.*, 90 FERC ¶ 61,243 (2000); and *Petal Gas Storage L.L.C.*, 102 FERC ¶ 61,243 (2003).

19. Petal announced an open season on the Cavern Conversions Project on October 30, 2006. As a result of the open season, which ended on December 4, 2006, Petal executed binding precedent agreements for 100 percent of the working gas capacity for the first phase of the project, or 2.35 Bcf (0.65 Bcf for Cavern No. 9 and 1.7 Bcf for Cavern No. 10) of the total project working gas capacity of 2.85 Bcf.¹¹ The prospective customers have requested a July 2007 in-service date.

III. Notice, Interventions, and Comments

20. Public notice of Petal's application was published in the *Federal Register* on December 20, 2006, 71 *Fed. Reg.* 76,313. Motions to intervene were due on or before January 4, 2007. No party filed motions to intervene, comments, or protests.

IV. Discussion

21. Since the proposed facilities will be used for the storage of natural gas that is transported in interstate commerce subject to the jurisdiction of the Commission, Petal's proposal is subject to the requirements of subsections (c) and (e) of section 7 of the NGA.

A. The Certificate Policy Statement

22. The Commission's September 15, 1999 Certificate Policy Statement provides guidance as to how it will evaluate proposals for certificating new construction.¹² 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. Our goal is to give appropriate consideration to the enhancement of competitive transportation alternatives, the

¹¹ See Petal's February 23, 2007 Third Supplemental Filing to its Cavern Conversions Project application. Petal states that it executed precedent agreements for firm gas storage service under Rate Schedule FSS, for an average term of four years, with Magnus Energy, AGL Resources, Sempra Commodities, and the Tennessee Valley Authority for the corresponding capacity amounts of .85 Bcf, .54 Bcf, .54 Bcf, and .42 Bcf.

¹² *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).

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.

23. 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 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. If residual adverse effects on these interest groups are identified after efforts have been made to minimize them, we 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.

24. As stated, the threshold requirement is that the applicant must be prepared to financially support the project without relying on subsidization from its existing customers. All of Petal's existing customers receive storage service under contracts with Petal at market-based rates. These contracts will not change as a result of the Petal Cavern Conversions Project. Moreover, under its market-based rate proposal for the new capacity, Petal will assume the economic risks associated with the project's costs to the extent that any capacity is unsubscribed. Thus, the Commission finds that Petal has satisfied the threshold requirement of the Certificate Policy Statement.

25. Second, Petal's storage project should not have any adverse impact on the service provided to Petal's existing customers. Nor will Petal's proposal have an impact on existing pipelines in the market and their captive customers, since the project will help meet a currently unserved market demand for storage, *i.e.*, the market demand to be served by the proposed expansion facilities represents new demand. Moreover, the new storage facilities should benefit shippers by improving the flexibility and reliability of service, in addition to meeting expanded market demand. Further, no storage company in Petal's market area has protested Petal's application.

26. Third, there should be minimal adverse impacts on landowners associated with Petal's Cavern Conversions Project. As stated, *supra*, all of the proposed facilities are located solely within the boundaries of the existing storage facility property owned by Petal or its affiliates. Thus, no new rights-of-way are required.

27. The Commission concludes that the Cavern Conversions Project will both meet unserved storage demand and facilitate the additional development of growing market demand for natural gas in the Southeast United States. As noted, Petal has signed binding precedent agreements for virtually all of the working gas capacity of the project. Petal's storage facility expansion will provide increased efficiency and reliability of service, thereby benefiting the public by helping to reduce energy costs to consumers. Based on the benefits the instant Petal project will provide to the market and the lack of any identified adverse effect on existing customers, other pipelines, landowners, or communities, the Commission finds, consistent with the Certificate Policy Statement and section 7 of the NGA, that the public convenience and necessity requires approval of the Petal Cavern Conversions Project.¹³

B. Market-Based Rates

28. Petal requests market-based rate authority for the expanded services it proposes to provide with the capacity created by the Cavern Conversions Project. As noted, *supra*, the Commission has previously granted Petal's requests to charge market-based rates for storage services using its existing storage facilities. Petal states that in the last review by the Commission of market-based rates for Petal, in Docket No. CP02-387-000, the Commission found that Petal (and its El Paso affiliates) lacked market power in the relevant geographic market based on Petal's combined market share of the existing storage capacity in the Gulf Coast Region of 16.9 percent for working gas capacity and 20.6 percent for maximum deliverability.¹⁴ Subsequent to that proceeding, Enterprise Products Partners (Enterprise) acquired Petal from El Paso Corporation. In its application in this case, Petal asserts that its market power analysis in Exhibit Z-1 demonstrates that Petal's market share for working gas capacity and deliverability, with the additional storage capacity in the two proposed caverns, will be below the level found to be appropriate for approval of market-based rates in Docket No. CP02-387-000 (4.1 percent and 11.6 percent for working gas capacity and deliverability, respectively).

29. Petal also states that Exhibit Z-1 reflects that there are many alternatives to Petal's storage service. According to Petal, it will face competition, not only from storage providers, but also from the capacity release market for storage service in the Gulf Coast

¹³ Consistent with Commission policy, Petal's certificate authority will be conditioned on its executing, prior to commencing construction, firm contracts for the capacity levels represented in its precedent agreements. *See, e.g., Rockies Express Pipeline, LLC*, 116 FERC ¶ 61,272 at Ordering Paragraph (C)(3) (2006).

¹⁴ *Petal Gas Storage L.L.C.*, 102 FERC ¶ 61,243 (2003).

region, and from various alternatives to storage, such as LNG, propane air facilities, seasonal and swing contracts, and balancing and no-notice service.

30. The Commission has approved market-based rates for storage services where applicants have demonstrated, under the criteria in the Commission's Alternative Rate Policy Statement,¹⁵ that they lack market power¹⁶ or have adopted conditions that significantly mitigate market power. In prior orders, we have approved requests to charge market-based rates for storage services based on a finding that the applicant for a proposed project would not be able to exercise market power due to its small size, its anticipated share of the market, and the existence of numerous competitors in the relevant geographic market.¹⁷ The Commission has also distinguished between production-area storage facilities, such as Petal's, and market-area storage.¹⁸ In general, the Commission has determined that market power in a production area is less of a concern due to the numerous alternative storage facilities operating in competition with one another.¹⁹ The Commission's analysis of whether an applicant has the ability to exercise market power includes three major steps: (1) definition of the relevant markets; (2) measurement of a

¹⁵*Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines*, 74 FERC ¶ 61,076, *reh'g denied*, 75 FERC ¶ 61,024 (1996), *petitions for review denied sub nom.*, *Burlington Resources Oil & Gas Co. v. FERC*, 172 F.3d 918 (D.C. Cir. 1998) (Alternative Rate Policy Statement), *criteria modified*, *Rate Regulation of Certain Natural Gas Storage Facilities*, 71 Fed. Reg. 36,612 (June 27, 2006), *FERC Statutes and Regulations* ¶ 31,220 (2006) (Order No. 678), *order on clarification and reh'g*, 117 FERC ¶ 61,190 (2006) (Order No. 678-A).

¹⁶ Market power is defined as the ability to profitably maintain prices above competitive levels for a significant period of time. Alternative Rate Policy Statement, 74 FERC ¶ 61,076 at 61,230.

¹⁷ *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); *Egan Hub Partners, L.P.*, 99 FERC ¶ 61,269 (2002).

¹⁸ *Moss Bluff White Partners, L.P.*, 80 FERC ¶ 61,181 (1997); *Steuben Gas Storage Company*, 72 FERC ¶ 61,102 (1995), *order on compliance filing and denying reh'g*, 74 FERC ¶ 61,024 (1996).

¹⁹ See, e.g., *Port Barre Investments, L.L.C. d/b/a Bobcat Gas Storage*, 116 FERC ¶ 61,052 at P 21 (2006).

firm's market share and market concentration; and (3) evaluation of other relevant factors.

31. Petal's market power analysis for the storage market, set forth in Exhibit Z-1 to its application, defines the relevant product and geographic markets, measures market share and concentrations, and evaluates the ease of entry into the relevant market.²⁰ Petal identifies the relevant product market as natural gas storage services, for which the principal customer base will be diversified and include industrial customers, gas marketers, electric generators, regional local distribution companies served by interstate pipelines connected to the Petal facility, and various large end users that will use the facility for seasonal, as well as short-term, storage. Petal identifies the relevant geographic markets for the storage facility as those areas in the Gulf Coast Region, from east Texas to Georgia, that are readily accessible to the interstate and intrastate pipelines that will be connected or readily accessible to the storage facility.²¹

32. The Commission uses the Herfindahl Hirschman Index (HHI)²² test to determine market concentration for gas pipeline and storage markets. The Alternative Rate Policy Statement states 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 in order to make a determination about a seller's ability to exert market power.

²⁰ Petal's market power analysis reflects the impact of its acquisition by Enterprise on its market concentration and market share in the relevant geographic market.

²¹ Petal is currently connected to Gulf South Pipeline Company and Tennessee Gas Pipeline Company through a storage header pipeline, and to the affiliated Hattiesburg storage facility also on the Petal Dome and near Petal's storage facilities. Petal is also connected to Destin Pipeline Company, Transcontinental Gas Pipe Line Company, and Southern Natural Gas Company via interconnections on Petal's pipeline that extends 59 miles north from the terminus of Petal's storage header.

²² An HHI is calculated by summing the squares of each storage seller's market share. The Alternative Rate Policy Statement specifies that the HHI is to be used as an indicator of the level of scrutiny to be given to the applicant. Alternative Rate Policy Statement at 61,235.

33. Petal's market power analysis shows an HHI calculation of 757 for working gas capacity and an HHI calculation of 666 for peak day deliverability.²³ These measures of market concentration are below the Commission's threshold level of 1,800 and, therefore, indicate that Petal would not have market power in the relevant market area after its proposed expansion of its storage facilities.

34. The market power analysis identifies over 50 storage facilities that either currently exist, have received Commission approval, or are under construction in the Gulf Coast Region, 19 of which the Commission has authorized to charge market-based rates.²⁴ The study finds that the current combined market working gas capacity of all of the identified Gulf Coast storage facilities, including Petal's storage facilities, is 831 Bcf, with Petal (and its Enterprise affiliates) controlling 33.87 Bcf, or 4.1 percent of the market.²⁵ Further, the study shows that Petal's 3,705 MMcf per day of peak deliverability will represent 11.6 percent of the total market peak deliverability of 31,946 MMcf per day. Thus, Petal's 4.1 and 11.6 percent aggregate shares of the relevant storage market will be relatively small.²⁶

35. Petal's market power analysis also presents additional factors that would further diminish Petal's small market share and the market concentration level and mitigate any potential market power of Petal. The study demonstrates the ease of entry into the Gulf Coast market, as evidenced by 12 newly proposed storage projects or expansions of existing storage facilities in the Gulf Coast Region,²⁷ indicating that Petal will have to compete against other potential storage facilities for customers within the relevant market area. These projects, if built, may incrementally expand the current working gas capacity in the Gulf Coast Region by up to 140 Bcf and peak day delivery by 8,130 MMcf per

²³ Exhibit Z-1 at 12 and Attachment 1 ("Market Share and [HHI] for the Gulf Coast Region").

²⁴ Exhibit Z-1 at 13 and Attachment 1.

²⁵ Exhibit Z-1 at 12 and Attachment 1.

²⁶ Petal notes that the recent change in Petal's ownership actually reduced its market share and the area's market concentration from previously approved levels. Exhibit Z-1 at 18.

²⁷ Exhibit Z-1 at Attachment 2 ("Planned and Announced Gas Storage Projects in the Gulf Coast Region").

day.²⁸ This information demonstrates that the barriers to entry to the storage markets in the relevant market area are low.

36. Other mitigating factors demonstrated by the market power analysis include: (1) the fact that any storage service expansion by Petal will compete as a new entrant in the market; (2) the existence of a capacity release market for storage in the Gulf Coast region; (3) direct competition by more than 50 storage facilities in the relevant market; and (4) the existence of alternatives to conventional underground natural gas storage, such as LNG and propane facilities.²⁹ The market power analysis identifies 29 peak shaving and LNG import facilities in service or pending construction, which will expand current working gas capacity and peak day deliverability by 29 Bcf and 15,550 MMcf per day, respectively.³⁰

37. In summary, the Commission finds that Petal's storage facility and Cavern Conversions Project are located in a highly competitive market where numerous storage facilities and service alternatives exist for potential customers. Petal's HHI for working gas capacity and for peak deliverability are substantially below the 1,800 threshold for market concentration warranting further scrutiny. Moreover, Petal's market share has significantly decreased from approximately 17 and 20 percent for working gas and deliverability determined in its last storage facility expansions, when Petal was owned by the El Paso Corporation, to 4.1 and 11.6 percent, respectively, and is relatively small. Based on Petal's market power analysis, which incorporates the aggregate data for Petal (including its proposed Cavern Conversions Project capacity, its Docket No. CP02-387-000 expansion in 2008, and its affiliate's storage levels), the Commission concludes that Petal lacks significant market power in the relevant market. Further, Petal's request for market-based rate authority is unopposed. For these reasons, the Commission finds that Petal's market-based rate proposal meets the traditional criteria established in the Alternative Rate Policy Statement. Therefore, the Commission will approve Petal's request for authority to charge market-based rates for the expanded storage service created by the conversion of Cavern Nos. 9 and 10.

²⁸ *Id.*

²⁹ Additional alternatives to underground storage cited in the market power analysis are seasonal swing contracts and balancing and no-notice services.

³⁰ Exhibit Z-1 at Attachment 3 ("Gulf Coast Peakshaving and LNG Import Facilities").

38. Consistent with previous orders authorizing market-based rates for services using Petal's existing facilities, the Commission will require that Petal notify the Commission of future circumstances that may significantly affect its market power status. Thus, our approval of continued market-based rate authority is subject to reexamination in the event that: (a) Petal seeks to add storage capacity beyond the capacity authorized in this proceeding; (b) an affiliate increases storage capacity; (c) an affiliate links storage facilities to Petal; or (d) Petal, or an affiliate, acquires an interest in, or is acquired by, an interstate pipeline connected to Petal. Since these circumstances could affect its market power status, Petal shall notify the Commission within 10 days of acquiring knowledge of any such changes. The notification shall include a detailed description of the new facilities and their relationship to Petal.³¹ The Commission also reserves the right to require an updated market power analysis at any time.³²

C. Request for Waivers

39. In our prior orders, after accepting Petal's proposal to charge market-based rates for its existing storage services, the Commission waived compliance with certain filing and reporting requirements in our regulations relevant to cost-based rates. As discussed herein, the Commission accepts Petal's proposal to charge market-based rates for its expanded capacity. Consequently, consistent with our findings in the previous orders authorizing market-based rates for services using Petal's existing facilities, the Commission will grant, with respect to the storage capacity to be added by the proposed expansion, Petal's request for waiver of the requirements in section 157.14(a) of the Commission's regulations to submit Exhibits K (Cost of Facilities), Exhibit L (Financing), Exhibit N (Revenues, Expenses, and Income), and Exhibit O (Depreciation and Depletion) in support of support cost-based rates.

40. The Commission will also waive, as inapplicable to market-based rate authority, section 157.6(b)(8) requiring the filing of detailed cost-based data, section 284.7(e) requiring reservation charges and the straight fixed-variable rate design, and the accounting and annual reporting requirements under Part 201 and sections 260.1 and

³¹ See *Copiah County Storage Company*, 99 FERC ¶ 61,316 (2002); *Egan Hub*, 99 FERC ¶ 61,269 (2002).

³² See *Rendezvous Gas Services, L.L.C.*, 112 FERC ¶ 61,141 at P 40 (2005). We note that in Order Nos. 678 and 678-A, the Commission chose not to impose a generic requirement that storage providers granted market-based rate authority on the basis of a market power analysis file an updated market power analysis every five years, or at other periodic intervals. See Order No. 678-A, 117 FERC ¶ 61,190 at PP 12-15.

260.2 (Form Nos. 2 and 2-A), respectively, of the Commission's regulations, except for the information necessary for the Commission's assessment of annual charges.³³ Thus, Petal is required to file pages 520 and 520a of Form No. 2-A, reporting the gas volume information which is the basis for imposing an Annual Charge Adjustment charge.³⁴ Further, the Commission will grant a waiver of section 157.14(a)(10) requiring the submission of gas supply data, which is inapplicable to storage operations.

41. The above waivers are subject to reexamination in the event that Petal's market power or market-based rates need to be reexamined. The waivers are also conditioned upon Petal maintaining sufficient records of cost and revenue data consistent with the Uniform System of Accounts should the Commission require Petal to produce this information in the future.

D. Engineering Analysis

42. In its application, Petal states that the cavern conversions will be conducted in accordance with Mississippi State Oil and Gas Board regulations and other applicable state and local regulations. Because the storage wells were previously used for NGL or salt brine storage, they are currently constructed with large bore conductor pipe to a depth of 40 to 50 feet, intermediate pipe to an approximate depth of 1,900 to 1,975 feet, and production casing to an approximate depth of 2,100 to 2,200 feet. Petal states that conversion of the caverns to natural gas storage will require a workover of the existing wells to install a new well bore casing to an approximate depth of 2,025 to 2,150 feet. Petal further states that after completion of the well conversions, and prior to placing the caverns in service, it will perform a mechanical integrity test on each cavern.

43. The Commission staff conducted an engineering analysis of the two caverns proposed for natural gas storage, including a review of the design capacity and maximum storage pressures of proposed natural gas facilities to ensure that the design is appropriate and efficient. Cavern No. 9 is capable of holding 3.21 Bcf of natural gas, and Cavern No. 10 is capable of holding 3.6 Bcf of natural gas. Since these calculated values are larger

³³ See *Dominion Cove Point LNG, LP*, 115 FERC ¶ 61,337 at P 147 (2006) ("Any company that transports or sells natural gas including an LNG terminal or storage provider is required to assess an [Annual Charge Adjustment] charge on the volumes transported or delivered") and *Wyckoff Gas Storage Co., L.L.C.*, 105 FERC ¶ 61,027 at P 65 (2003).

³⁴ See, e.g., *SG Resources Mississippi, L.L.C.*, 118 FERC ¶ 61,048 at P 29 (2007) and *Central New York Oil & Gas Company, LLC*, 116 FERC ¶ 61,277 at P 39 (2006).

than the Petal's proposed storage capacity of 1.0 Bcf for Cavern No. 9 and 3.45 Bcf for Cavern No. 10, and deliverability will not be affected by the excess cavern space, Commission staff found that the caverns have been appropriately designed to provide the services proposed. The Commission staff also determined that the minimum pressure gradient is adequate to prevent cavern deterioration.

44. Based on this review and analysis, the Commission concludes that the facilities are appropriately designed to provide 4.45 Bcf of total storage capacity (2.85 Bcf working gas and 1.60 Bcf cushion gas). The Commission further concludes that the geological and engineering parameters for the underground natural gas salt cavern storage facilities proposed by Petal are well defined. The analysis shows that Petal's proposed cavern locations are well within the design criteria and confinement of the salt formation and are at a sufficient depth and within proper boundaries. Also, the maximum and minimum cavern pressure gradients throughout the storage cycle have been chosen to preserve the structural integrity of the caverns. Thus, the caverns' existing arrangement would avoid pressure influence between caverns when the caverns are operated at full capacity and pressure.

45. Accordingly, the Commission finds that the proposed salt cavern storage facility, if constructed as described, is technically sound and well defined. However, Petal must comply with the engineering conditions attached in Appendix A to this order.

E. Environmental Analysis

46. The Commission's staff prepared an environmental assessment (EA) for Petal's proposal, which was issued on March 1, 2007. The EA addresses geology, soils, water resources, fisheries, wetlands, vegetation and wildlife, threatened and endangered species, cultural resources, land use and recreation, air quality and noise, and alternatives.

47. Based upon the analysis in the EA, the Commission concludes that if the project is constructed and operated in accordance with Petal's application and supplements filed December 18, 2006, and February 21 and 23, 2007, and the environmental conditions in Appendix B of this order, approval of Petal's proposal would not constitute a major federal action significantly affecting the quality of the human environment.

48. 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.³⁵

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

50. 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) A certificate of public convenience and necessity is issued to Petal in Docket No. CP07-30-000 authorizing it to construct and operate the Cavern Conversions Project, as described and conditioned herein, and as more fully described in the application.

(B) The certificate issued in Ordering Paragraph (A) is conditioned upon:

(1) Petal's compliance with all applicable Commission regulations under the Natural Gas Act, particularly the general terms and conditions set forth in Parts 154 and 284 and paragraphs (a), (c), (e) and (f) of section 157.20.

(2) Petal's execution of firm contracts for the capacity levels represented in its precedent agreements, prior to commencing construction; and

(3) The certificate issued in Ordering Paragraph (A) is conditioned upon Petal's compliance with the engineering and environmental conditions set forth in Appendices A and B of this order.

(C) Petal's request for Commission authorization to charge market-based storage rates for firm and interruptible storage service is granted, as discussed herein.

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

Petal's market power and market-based storage rate authority shall be subject to reexamination 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; or (4) Petal, or an affiliate, acquires an interest in, or is acquired by, an interstate pipeline connected to Petal. Petal shall notify the Commission within 10 days of any such change in circumstance that may alter Petal's market power status.

(D) Waiver is granted of the Commission's regulations that have been deemed inapplicable to storage providers with market-based rates, as discussed in this order.

(E) 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 the final order in this proceeding.

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

By the Commission.

(S E A L)

Philis J. Posey,
Acting Secretary.

APPENDIX A
Petal Gas Storage, L.L.C.
Engineering Conditions

This authorization includes the following condition(s):

1. The maximum inventory of natural gas stored in Petal's facilities shall not exceed the certificated levels of 4.45 Bcf at 14.73 psia and 60° F (1 Bcf for Cavern 9 and 3.45 Bcf for Cavern 10); the maximum gas storage shut-in stabilized pressure of Caverns 9 and 10 will not exceed 1,725 psi and 1,640 psi respectively.
2. The final gas storage operating capacity of each cavern, working gas capacity, cushion gas capacity and the minimum pressure should be determined after cavern's operating parameters are determined and filed with the Commission (include data work papers to support the actual operating capacity determination).
3. Before commencing gas storage operations in each of the two caverns, Petal shall:
 - (a) Conduct a Mechanical Integrity Test for each of the two caverns before initiation of each well/cavern to natural gas storage, and file the results with the Commission;
 - (b) File with the Commission copies of the latest interference tracer surveys, or other testing or analysis on each cavern to verify the lack of communication between the caverns;
 - (c) Establish and maintain a subsidence monitoring network over the proposed caverns storage area; and,
 - (d) Assemble, test and maintain an emergency shutdown system.
4. Twice annually, Petal shall conduct a leak detection test during storage operations to determine the integrity of each cavern, well bore, casing and wellhead, and file the results with the Commission.
5. Each cavern's well will be periodically logged to check the cavern roof and status of each casing string. Additionally, every five years Petal shall conduct sonar surveys of the caverns to monitor their dimensions and shape and to estimate pillar thickness between openings throughout the storage operations, and file results with the Commission.
6. Petal shall conduct an annual inventory verification study on each cavern, and file results with the Commission.

7. The Petal Storage Project shall be operated in such a manner as to prevent and minimize gas loss or migration.
8. Petal shall file with the Commission semi-annual reports (to coincide with the termination of the injection and withdrawal cycles) containing the following information in accordance with section 157.214 (c) of the Commission's regulations (volumes shall be stated at 14.73 psia and 60 °F, and pressures shall be stated in psia):
 - (a) The daily volume of natural gas injected into 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; and, the average working pressure on such maximum days taken at a central measuring point where the total volume injected or withdrawn is measured.
 - (d) The results of any tests performed to determine the actual size, configuration, or dimensions of the storage caverns.
 - (e) A discussion of current operating problems and conclusions.
 - (f) Other data or reports which may aid the Commission in the evaluation of the storage project.
9. Petal shall continue to file the above semi-annual reports in accordance with section 157.214(c) of the Commission's regulations for a period of one year following the date facility operation at maximum level is initiated.

APPENDIX B
Petal Gas Storage, L.L.C.
Environmental Conditions

As recommended in the EA, this authorization includes the following condition(s):

1. Petal shall follow the construction procedures and mitigation measures described in its application and supplements and as identified in the EA, unless modified by the Commission Order. Petal 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 the Office of Energy Projects (OEP) before using that modification.

2. The Director of OEP has delegation 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 shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, environmental inspectors, and contractor personnel will be informed of the environmental inspector's 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.