127 FERC ¶ 61,257
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;
Suedeen G. Kelly, Marc Spitzer,
and Philip D. Moeller.

UGI LNG, Inc. Docket No. CP08-458-000

ORDER ISSUING CERTIFICATE

(Issued June 18, 2009)

1. On August 8, 2008, UGI LNG, Inc. (UGI LNG) filed an application under section 7(c) of the Natural Gas Act (NGA) for a certificate of public convenience and necessity authorizing it to construct and operate a liquefied natural gas (LNG) storage tank at the Temple LNG storage facility in Berks County, Pennsylvania.[1] For the reasons stated herein, we will authorize UGI LNG's proposal.

I. Background

2. The Temple LNG storage facility was constructed in 1971 as a non-jurisdictional peak shaving facility. Currently, the Temple storage facility consists of a liquefier designed to deliver up to 4,000 dekatherms per day (Dth/d) of LNG, a 250 million cubic feet (MMcf) storage tank, and a vaporization system with a maximum daily vaporization capability of 55,200 Dth/day. The Temple storage facility receives gas supplies for liquefaction and storage at Texas Eastern Transmission L.P.'s (Texas Eastern) Temple delivery meter and delivers all its vaporized LNG into the distribution system of UGI Utilities, an affiliate of UGI LNG.

[1] UGI LNG styled its filing as a petition to amend the order in *UGI LNG, Inc.*, 119 FERC ¶ 61,056 (2007). That order authorized UGI LNG to acquire the existing Temple storage facility from a non-jurisdictional entity. Since the current application involves UGI LNG's proposal to expand the existing facilities, which they now own and operate, the Commission is treating the proposal as a request for certificate authorization in a new proceeding, rather than as an amendment to the acquisition authorization granted previously.

3. On April 19, 2007, the Commission issued an order[2] authorizing UGI LNG: (1) to acquire the Temple storage facility from UGI Energy Services (UGI Energy)[3] and a 5,000 foot long, 8-inch diameter pipeline, interconnecting with Texas Eastern, from UGI Utilities and (2) to construct and operate a new boil-off compressor, water pressure monitors, underground piping and pumps, and electrical equipment to upgrade the fire protection system associated with the facilities to be acquired. The April 19, 2007 Order also issued UGI LNG blanket certificates under Subpart F of Part 157 of the regulations to construct and operate certain routine facilities and under Subpart G of Part 284 to provide open access LNG storage, liquefaction, and delivery of vaporized LNG on a firm and interruptible basis at market-based rates under a pro forma tariff.

4. The April 19, 2007 Order recognized that all the storage capacity in the existing 250 MMcf storage tank was subscribed by UGI Energy for service to UGI Utilities under a 15-year precedent agreement executed on August 15, 2006. Hence, firm service to other parties initially would be available only by means of capacity release. The existing facilities were authorized to be placed in interstate service by June 1, 2009.

II. Proposal

5. UGI LNG proposes to construct a new LNG storage tank with 1,000 MMcf of working gas capacity and a 150,000 Dth/day vaporization and send-out system along with associated boil-off handling equipment. UGI LNG will construct approximately 100 feet of 12-inch diameter pipeline from the outlet of the vaporizers to a new point of interconnection with Texas Eastern.[4] Once the proposed tank and appurtenant equipment are installed and placed in service, the Temple facility will have a maximum LNG storage capacity of 1,250 MMcf and a maximum liquefaction and delivery rate of 205,200 Dth/day. UGI LNG requests continuing authority to charge market-based rates for its firm and interruptible storage services.

6. UGI LNG asserts that ample market demand exists for additional LNG peaking storage capacity and deliverability because of increased generation and industrial demand for natural gas nationally, as well as increased demand on Texas Eastern's system in the population centers of Philadelphia, New Jersey, and the New York City metropolitan area. Based on the results of an open season that concluded on March 6, 2009, UGI LNG

[2] *UGI LNG, Inc.*, 119 FERC ¶ 61,056 (2007).

[3] UGI LNG is a subsidiary of UGI Energy, a marketing and capacity-owning subsidiary of UGI Corporation.

[4] Texas Eastern will construct tap and flow control equipment under its blanket construction certificate.

reports that it received non-binding bids for firm capacity from six companies for more than the capacity proposed for the new storage tank. UGI LNG anticipates that it will execute precedent agreements for firm service using the proposed new storage tank to commence in April 2012.

III. Notice and Interventions

7. Notice of the application was published in the *Federal Register* on August 28, 2008.[5] A timely, unopposed motion to intervene was filed by UGI Utilities. Timely, unopposed motions to intervene are automatically granted by operation of Rule 214 of the Commission's Rules of Practice and Procedure.[6]

IV. Discussion

8. Because UGI LNG proposes to construct and operate facilities that will be used to transport natural gas in interstate commerce, UGI LNG's proposal is subject to the jurisdiction of the Commission and the requirements of subsections (c) and (e) of section 7 of the NGA.

A. Application of the Policy Statement

9. The Certificate Policy Statement provides guidance as to how the Commission will evaluate proposals for new construction.[7] 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 Commission's 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 unnecessary exercise of eminent domain or other disruptions of the environment.

10. Under this policy, the threshold requirement for existing pipelines proposing new projects is that the pipeline must be prepared to support the project financially without

[5] 73 Fed. Reg. 50,809.

[6] 18 C.F.R. § 385.214(a)(3) (2008).

[7] *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).

relying on subsidization from 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 interests 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 a proposed project's benefits outweigh its adverse effects on economic interests will the Commission proceed to complete the environmental analysis, in which other interests are considered.

11. 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. UGI LNG's current service is provided at market-based rates and UGI LNG is requesting authorization to provide its expansion service at market-based rates as well. Under these circumstances, the expansion would not be subsidized by UGI LNG's existing customer. Accordingly, UGI LNG has satisfied the threshold no-subsidy requirement of the Certificate Policy Statement.

12. The expansion of the Temple Facility will have no adverse impacts on existing storage providers or their customers. As discussed below, the proposed project will be located in a competitive market and will increase competitive alternatives. In addition, UGI LNG has received non-binding bids for more capacity than is proposed. Further, since UGI LNG intends to construct the proposed storage tank and vaporization equipment directly adjacent to its existing facilities and entirely within the acreage UGI LNG currently owns, there will be no significant adverse impacts on land owners and surrounding communities. Thus, consistent with the Certificate Policy Statement and section 7 of the NGA, the Commission finds UGI LNG's proposal to be required by the public convenience and necessity.

B. Market-Based Rates

13. UGI LNG proposes to use the capacity made available by the proposed facilities to offer firm and interruptible LNG storage and liquefaction services at market-based rates. The April 19, 2007 Order provides for the reexamination of UGI LNG's market-based rate authority if UGI LNG should seek to expand its originally certificated storage capacity or if UGI LNG or its affiliates acquire increased storage capacity. In addition to the additional storage capacity UGI LNG proposes to construct, UGI Utilities, an affiliate of UGI LNG, has entered into an agreement to acquire existing underground natural gas storage assets currently owned by PPL Gas Utilities Corporation (PPL) in Pennsylvania. Therefore, UGI LNG supports its proposal with an updated market power analysis which concludes that UGI LNG will continue to lack market power with respect to its services.

14. Under the Alternative Rate Policy Statement, [8] the Commission's framework for evaluating requests for market-based rates has two principal purposes: (1) to determine whether the applicant can withhold or restrict services and, as a result, increase the price by a significant amount for a significant period of time; and (2) to determine whether the applicant can discriminate unduly in price or terms and conditions.[9] To find that an applicant cannot withhold or restrict services, significantly increase prices over an extended period, or unduly discriminate, the Commission must find either that there is a lack of market power[10] because customers have good alternatives,[11] or that the applicant or the Commission can mitigate the market power with specified conditions. 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 firm's market share and market concentration; and (3) evaluation of other relevant factors.

15. In support of its request for reaffirmation of its market-based rate authority, UGI LNG provided in testimony at Exhibit I of its application, a market power study based on the criteria set forth in the Alternative Rate Policy Statement. UGI LNG's market power analysis defines the relevant geographic market as New York and Pennsylvania, and the product market as firm and interruptible natural gas storage service. The geographic market used in UGI LNG's analysis consists of 12 companies that own competing natural gas storage facilities with a total working gas capacity of 510,337 MMcf per day. The Temple Facility will add up to an additional 1,000 MMcf of working gas capacity bringing the total working gas capacity up to 511,337 MMcf. The market power study

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[8] *Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines and Regulation of Negotiated Transportation Services of Natural Gas Pipelines (*Alternative Rate Policy Statement*)*, 74 FERC ¶ 61,076 (1996), *reh'g and clarification 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); *Rate Regulation of Certain Natural Gas Storage Facilities*, Order No. 678, FERC Stats. & Regs. ¶ 31,220, Order No. 678-A, *order on clarification and reh'g*, 117 FERC ¶ 61,190 (2006).

[9] *E.g., Orbit Gas Storage, Inc.*, 126 FERC ¶ 61,095 (2009); *Leaf River Energy Center, LLC*, 125 FERC ¶ 61,131 (2008).

[10] 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.

[11] A good alternative is an alternative that is available soon enough, has a price that is low enough, and has a quality high enough to permit customers to substitute the alternative for an applicant's service. 74 FERC ¶ 61,076 at 61,231.

demonstrates that numerous alternatives to the proposed services exist, given the number and size of existing storage facilities in the relevant market and that no barriers to entry in the market exist.

16. The Commission uses the Herfindahl Hirschman Index (HHI) test to determine market concentration for natural gas storage markets in the applicable geographic market. 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 sources of supply 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.[12]

17. UGI LNG utilizes two measures of natural gas storage capacity in its analysis of market concentration, working gas capacity and peak day deliverability, and provides HHI calculations reflecting three scenarios: (1) control of the existing Temple Facility (Temple I) only; (2) control of the Temple I facility as well as the PPL's storage facilities acquired by UGI LNG's affiliate, UGI Utilities; and (3) control of the combined Temple I and proposed Temple facilities (herein Temple II), and UGI Utilities' PPL's storage facilities. For purposes of the Commission's analysis, we have combined the Temple I, Temple II, and UGI Utilities' PPL's storage facilities.

18. UGI LNG's market power study, as adjusted by the Commission's analysis, shows an HHI[13] for working gas capacity of 3,376.74,[14] with UGI LNG's market share being 3.97 percent, and an HHI for peak day deliverability of 3,034.15, with UGI LNG's market share also being 3.97 percent. These values are higher than the 1,800 level cited in the Alternative Rate Policy Statement; therefore, the Commission will consider other factors in determining market share.

19. While the New York/Pennsylvania storage market is considered concentrated based on HHI analysis, the concentration results from two storage providers, Dominion Transmission Inc. (Dominion) and National Fuel Gas Supply Corporation (National Fuel). The market power study shows that UGI LNG's market share is relatively small,

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[12] Alternative Rate Policy Statement, 74 FERC ¶ 61,076 at 61,235.

[13] An HHI is calculated by summing the squares of each storage seller's market share. Alternative Rate Policy Statement, 74 FERC ¶ 61,076 at 61,235.

[14] UGI LNG's market-power study shows current HHIs for working gas capacity of 3,388.10 and for deliverability of 3,034.15. The Commission, however, calculated the HHI for working gas to be 3,376.74, a more accurate representation of the working gas capacity, and left unchanged UGI LNG's proposed HHI for deliverability.

i.e., only 3.97 percent for both working gas capacity and peak day deliverability. Market shares indicate whether the applicant could hold the price above a competitive level. The HHI indicates whether all providers acting in concert could collude to hold prices at a monopoly level. Although the New York/Pennsylvania storage market is concentrated, with Dominion and National Fuel holding over 50 and 16 percent, respectively, of the market share for both working gas capacity and peak day deliverability, the Commission has found in similar cases that this market concentration was acceptable because Dominion's and National Fuel's facilities are regulated and cost-based, alleviating the market power potential of relatively small applicants.[15]

20. The Commission has previously approved market-based rates for storage projects located in the New York and Pennsylvania area based on a finding that the projects would not be able to exercise market power due to their small size, anticipated small share of the market, and the existence of other competitors.[16] In accord with such precedent and based on UGI LNG's small market share, the Commission concludes that UGI LNG will lack market power. For these reasons, we will approve UGI LNG's request to continue to charge market-based rates for all firm and interruptible storage, liquefaction, and vaporization services.

21. In addition to other reporting requirements imposed herein, UGI LNG must notify the Commission if future changes in circumstances significantly affect its present market power status. Thus, our approval of market-based rates is subject to reexamination in the event that: (a) UGI LNG 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 UGI LNG; or (d) UGI LNG, or an affiliate, acquires an interest in, or is acquired by, an interstate pipeline connected to UGI LNG. Since these circumstances could affect its market power status, UGI LNG 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 UGI LNG.[17] The

[15] *See, e.g., CNYOG,* 116 FERC ¶ 61,277, at P 33 (2006) and *Wyckoff Gas Storage Co., L.L.C.,* 105 FERC ¶ 61,027 (2003).

[16] *See, e.g., Steckman Ridge, LP,* 123 FERC ¶ 61,248 (2008); *Seneca Lake Storage, Inc.,* 98 FERC ¶ 61,163 (2002); and *Central New York Oil and Gas Co., LLC,* 94 FERC ¶ 61,194 (2001).

[17] *See, e.g., Copiah County Storage Co.*, 99 FERC ¶ 61,316 (2002); *Egan Hub Partners, L.P.*, 99 FERC ¶ 61,269 (2002).

Commission also reserves the right to require an updated market power analysis at any intervening time.[18]

C. Waivers of Filing, Reporting, and Accounting Requirements

22. Because UGI LNG proposes to charge market-based rates for storage services using its proposed storage tank and has no existing interstate pipeline operation, UGI LNG requests waiver of the Commission's cost-based regulations. The relevant cost-based regulations are: (1) section 157.6(b)(8) (certificate applicants to submit cost and revenue data); (2) section 157.14(a)(13), (14), (16), and (17) (cost based exhibits); (3) section 157.14(a)(10) (showing of accessible gas supplies); (4) section 157.20(c)(3) (construction cost statement); (5) the accounting and reporting requirements of Part 201 and § 260.2 relating to cost-of-service rate structure (Form 2A); (6) sections 284.7(e) (firm reservation charge), 284.9(c) (interruptible reservation charge), and 284.10 (charging storage rates based on the Straight Fixed Variable rate design methodology).

23. As the Commission noted in the April 19, 2007 Order, the cost-related information required by these regulations is not relevant in light of our approval of market-based rates for UGI LNG's storage services, except for the information necessary for the Commission's assessment of annual charges. UGI LNG is required to file page 520 of Form 2-A to report the gas volume information which is the basis for imposing an Annual Charge Adjustment charge. Thus, consistent with our findings in previous orders,[19] the Commission will grant UGI LNG's request for waivers of the regulations requiring the filing of cost-based information, reservation charges, and the use of a straight fixed variable rate design. We will also grant a waiver of section 157.14(a)(10) requiring an applicant to submit gas supply data, which does not pertain to natural gas storage. In addition, the Commission will require UGI LNG to maintain records of cost and revenue data consistent with the Uniform System of Accounts should the Commission require UGI LNG to produce these reports in the future.

D. Tariff Provisions

24. UGI LNG proposes to offer LNG storage and liquefaction services from the proposed storage tank on an open-access basis under the same rate schedules and terms and conditions approved in the April 19, 2007 Order and incorporated in the actual tariff

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[18] *See, e.g., Floridian Natural Gas Storage Company,* 124 FERC ¶ 61,214, at P 33 (2008).

[19] *See, e.g., SG Resources Mississippi, L.L.C.,* 125 FERC ¶ 61,197, at P 25 and 26 (2008); *Port Barre Investments, L.L.C.,* 116 FERC ¶ 61,052, at P 34 (2006); and *Liberty Gas Storage, LLC,* 113 FERC ¶ 61,247, at P 54 (2005).

sheets. These tariff sheets became effective on June 1, 2009, in an unpublished letter order in Docket No. RP09-365-000. UGI LNG asks for clarification in certain respects.

25. The April 19, 2007 Order approved section 28 of UGI LNG's general terms and conditions authorizing UGI LNG to retain gas which a shipper fails to remove from its system on or before the date of termination of its service agreement and to credit the proceeds from the sale of retained gas to non-offending shippers.[20] UGI LNG asks the Commission to acknowledge the continued appropriateness of this tariff provision. The Commission finds that these penalty and crediting provisions are still appropriate.

26. The April 19, 2007 Order concluded that UGI LNG was not subject to the standards of conduct for transmission providers because it is a storage provider authorized to charge market-based rates that is not interconnected with any affiliated interstate pipeline as defined in 18 C.F.R. § 358.3(a)(3).[21] The Commission stated that if at any time UGI LNG no longer fits the criteria in those regulations, the Commission would consider it a transmission provider subject to the standard of conduct requirements. UGI LNG asks us to apply the same exemption here. The Commission grants the request.

27. The April 19, 2007 Order granted UGI LNG's request for an exemption from the electronic data interchange (EDI) requirements established by the North American Energy Standards Board unless a customer should make a request. In that event, the order required UGI LNG to implement an EDI within 90 days following such request. UGI LNG asks the Commission to extend this exemption from EDI requirements to its proposed facilities as well. The Commission grants the request.

E. Environment

28. On October 18, 2007, in Docket No. PF07-16-000, the Commission approved UGI LNG's request to use the pre-filing review process for the Temple LNG plant expansion. As part of the pre-filing review, on January 15, 2008, Commission staff issued a *Notice of Intent to Prepare an Environmental Assessment* (NOI). The Pennsylvania Department of Environmental Protection (PADEP) expressed concerns about the project's effects on air quality, erosion and sediment control, stream and wetlands encroachment, post-construction storm water management, and threatened and endangered species. The Berks County Planning Commission expressed concerns about the project's effects on existing and future land use, transportation, emergency management, and recreational areas.

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[20] P 26.

[21] P 10, 11.

29. In a letter dated September 17, 2008, the U.S. Fish and Wildlife Service (FWS) stated that the project would be within the known range of the bog turtle, a species federally listed as threatened and requested the applicant to identify all wetlands within 300 feet of the project area that could be a habitat for the bog turtle. FWS requested that a "Bog Turtle Habitat Survey" be submitted in accordance with FWS guidelines to FWS for review and concurrence. On October 16, 2008, UGI LNG filed the results of its bog turtle survey reporting that there are no wetlands that could potentially support bog turtles within 300 feet of the project area and no likely adverse effect. On December 22, 2008, UGI LNG filed the FWS's response concurring with the survey's findings, that the project is not likely to adversely affect the bog turtle. The Commission concurs with that finding.[22]

30. Our staff prepared an environmental assessment (EA) for UGI LNG's proposal. The EA addressed: geology and soils; water resources; vegetation; wildlife and aquatic species; threatened, endangered and special status species; land use, recreation and visual resources; socioeconomics; transportation; cultural resources; air quality and noise; reliability and safety; cumulative impacts; and alternatives. The EA addressed all substantive issues raised in the comments in response to the NOI. The EA was issued for a 30-day public comment period and placed into the public record on April 10, 2009. We received one comment on the EA.

31. In its comment on the EA, the PADEP noted that if contamination is identified within the land impacted by the proposed project, UGI LNG should follow the Commonwealth of Pennsylvania's Act 2 Land Recycling Program process. The Commission notes that other than the minor amount of the project facilities that would be constructed within the existing plant site footprint, the new facilities would be within an adjacent greenfield area designated as prime farmland and currently used for crop production. UGI LNG has not identified any contaminated soils on its planned construction footprint.

32. Based on the discussion in the EA, we conclude that if constructed and operated in accordance with UGI LNG's application and supplements and in compliance with the environmental conditions in the appendix to this order, approval of this proposal would not constitute a major federal action significantly affecting the quality of the human environment.

33. Any permits issued with respect to the jurisdictional facilities authorized herein must be consistent with the conditions of this certificate. The Commission encourages state or local cooperation between interstate pipelines and local authorities. However, this does not mean that state and local agencies, through application of state or local laws,

[22] EA at 35.

may prohibit or unreasonably delay the construction or operation of facilities approved by this Commission.[23]

34. At a hearing held on June 18, 2009, the Commission on its own motion, received and made a part of the record all evidence, including the application, as supplemented, and exhibits thereto, submitted in this proceeding and upon consideration of the record,

The Commission orders:

(A) A certificate of public convenience and necessity is issued to UGI LNG under section 7 of the NGA to construct and operate an LNG storage tank and appurtenant facilities, as described more fully in the application and in the body of this order.

(B) The authorization in the above paragraph is conditioned on UGI LNG's:

(1) complying with the environmental conditions set forth in the appendix to this order and all regulations under the NGA including, but not limited to, Parts 154, 157, and 284, and paragraphs (a), (c), (e), and (f) of section 157.20 of the Commission's regulations; and

(2) constructing and making available for service the facilities described herein, within three years from the date of this order was issued.

(C) UGI LNG's request for continued authorization to charge market-based storage rates for firm and interruptible storage service is approved, as discussed in this order. UGI LNG shall notify the Commission within 10 days of acquiring knowledge of any of the following: (a) UGI LNG's adding storage capacity beyond the capacity authorized in this order; (b) an affiliate's increasing storage capacity; (c) an affiliate's linking storage facilities to UGI LNG; (d) UGI LNG or an affiliate's acquisition of an interest in, or being acquired by, an interstate pipeline connected to UGI LNG.

(D) UGI LNG is granted waiver of the Commission's cost-based regulations, as discussed in the body of this order with respect to services using the proposed storage tank. UGI LNG is required to file page 520 of Form No. 2-A to report gas volume information as the basis for imposition of ACA charges. This waiver is subject to reexamination in the event that UGI LNG's market power or market-based rates need to

[23] *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).

be re-examined. UGI LNG shall maintain records consistent with the Uniform System of Accounts.

(E) Based on UGI LNG's assertions in its application, UGI LNG will not be a Transmission Provider under 18 C.F.R. § 358.3(a)(3). If at any time UGI LNG no longer fits the criteria in section 385.3(a)(3), it will be considered a Transmission Provider under part 358 and must comply with the standard of conduct requirements.

(F) UGI LNG 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 UGI LNG. UGI LNG shall file written confirmation of such notification with the Secretary of the Commission (Secretary) within 24 hours.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

Appendix

Environmental Conditions

This authorization is subject to the following environmental conditions:

1. UGI LNG shall follow the construction procedures and mitigation measures described in its application, supplemental filings (including responses to staff data requests), and as identified in the EA, unless modified by the Order. UGI LNG must:
   a. request any modification to these procedures, measures, or conditions in a filing with the 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. For the LNG facility, the Director of OEP has delegated authority to take all steps necessary to ensure protection of life, health, property, and the environment during construction and operation of the project. This authority shall include:
   a. stop-work authority and authority to cease operation; and
   b. the design and implementation of any additional measures deemed necessary to ensure continued compliance with the intent of the conditions of the Order.
3. For pipeline facilities, 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 this Order; and
   b. the design and implementation of any additional measures deemed necessary (including stop-work authority) to ensure 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.
4. **Prior to any construction**, UGI LNG 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.

5. **Within 60 days of the acceptance of this certificate and before construction** begins, UGI LNG shall file an initial Implementation Plan with the Secretary for review and written approval by the Director of OEP. UGI LNG must file revisions to the plan as schedules change. The plan shall identify:

    a. how UGI LNG will implement the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests), identified in the EA, and required by this Order;

    b. how UGI LNG will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to onsite construction and inspection personnel;

    c. company personnel, including environmental inspectors and contractors, who will receive copies of the appropriate material;

    d. the location of the environmental compliance training UGI LNG will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change);

    e. the company personnel (if known) and specific portion of UGI LNG's organization having responsibility for compliance;

    f. the procedures (including use of contract penalties) UGI LNG will follow if noncompliance occurs; and

    g. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:

        i. the completion of all required surveys and reports;

        ii. the environmental compliance training of on-site personnel;

        iii. the start of construction; and

        iv. the start and completion of restoration.

6. UGI LNG must receive written authorization from the Director of OEP **before commencing service** from the project. Such authorization will be granted only following a determination that the LNG facility has been constructed in accordance with Commission approval and applicable standards and can be expected to operate safely as designed.

7. **Within 30 days of placing the certificated facilities into service**, UGI LNG shall file an affirmative statement with the Secretary, certified by a senior company official:

    a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or

b. identifying which of the certificate conditions UGI LNG has complied with or will comply with. This statement shall also identify any areas affected by the project where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.

8. **Prior to construction,** UGI LNG shall file with the Secretary, for review and written approval by the Director of OEP, any proposed engineering design changes resulting from the review by the Berks County Planning Commission and Ontelaunee Township.

9. UGI LNG shall make all reasonable efforts to ensure its predicted noise levels from the modified Temple LNG facility are not exceeded at all nearby NSAs and file noise surveys showing this with the Secretary **no later than 60 days** after placing the modified Temple LNG facility into service. However, if the noise attributable to the operation of the modified Temple LNG facility at full load exceeds an L_{dn} of 55 dBA at any nearby Noise Sensitive Area (NSA), UGI LNG shall file a report on what changes are needed and shall install additional noise controls to meet that level **within one year** of the in-service date. UGI LNG shall 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.

10. UGI LNG shall comply with the data submittal guidelines contained in Part II Section 4, and applicable Appendices, of the Commission's "Draft Seismic Design Guidelines and Data Submittal Requirements for LNG Facilities" (January 2007). Any modifications to the currently proposed design criteria or mitigation measures shall be clearly identified and addressed in a final Design Basis Document as detailed in Appendices D and E. The final proposed seismic categorization of all structures, components, and systems, as described in Appendix C shall be provided.

The following measures shall apply to the UGI LNG design and construction details. Information pertaining to these specific recommendations shall be filed with the Secretary for review and written approval by the Director of OEP either: prior to initial site preparation; prior to construction of final design; prior to commissioning; or prior to commencement of service, as indicated by each specific condition. Specific engineering, vulnerability, or detailed design information meeting the criteria specified in Order No. 683 (Docket No. RM06-24-000), including security information, shall be submitted as critical energy infrastructure information pursuant to 18 C.F.R. 388.112 (2008). See Critical Energy Infrastructure Information, Order No. 683, 71 Fed. Reg. 58,273 (October 3, 2006), FERC Stats. & Regs. 31,228 (2006). Information pertaining to items such as off-site emergency response, procedures for public notification and evacuation, and construction and operating reporting requirements would be

subject to public disclosure. All information shall be filed a minimum of 30 days before approval to proceed is requested.

11. Complete plan drawings and a list of the hazard detection equipment shall be filed **prior to initial site preparation**. The information shall include a list with the instrument tag number, type and location, alarm locations, and shutdown functions of the proposed hazard detection equipment. Plan drawings shall clearly show the location of all detection equipment.

12. UGI LNG shall provide a technical review of its proposed facility design that:

    a. identifies all combustion/ventilation air intake equipment and the distances to any possible hydrocarbon release (LNG, flammable refrigerants, flammable liquids, and flammable gases); and

    b. demonstrates that these areas are adequately covered by hazard detection devices and indicate how these devices would isolate or shutdown any combustion equipment whose continued operation could add to or sustain an emergency.

    UGI LNG shall file this review **prior to initial site preparation**.

13. Complete plan drawings and a list of the fixed and wheeled dry-chemical, fire extinguishing, and other hazard control equipment shall be filed **prior to initial site preparation**. The information shall include a list with the equipment tag number, type, size, equipment covered, and automatic and manual remote signals initiating discharge of the units. Plan drawings shall clearly show the planned location of all fixed and wheeled extinguishers.

14. Facility plan drawings showing the proposed location of, and area covered by, each monitor, hydrant, deluge system, hose, and sprinkler, as well as piping and instrumentation diagrams of the fire water system, shall be filed **prior to initial site preparation**.

15. UGI LNG shall perform a hazard design review that addresses operability, reliability, and safety of the updated intermediate piping and instrumentation diagrams (P&ID). A copy of the hazard design review, the list of recommendations that are to be incorporated in the final facility design, and the updated intermediate P&IDs shall be filed **prior to initial site preparation**.

16. Procedures shall be developed for off-site contractors' responsibilities, restrictions, limitations, and supervision of these contractors by UGI LNG project staff, **prior to initial site preparation**.

17. UGI LNG shall provide information/revisions related to the 14 responses to the October 21, 2008 Engineering Information Request, which stated that corrections or modifications would be made to the design. The **final design** shall specifically address response numbers 16, 19, 33, 36, 37, 41, 51, 59, 60, 61, 65, 67, 72, and 79 using management of change procedures.

18. Drawings of the storage tank piping support structure and support of horizontal piping at grade shall be filed with the **final design**.
19. The P&IDs in the **final design** shall show and number all drain, vent, main, and car-sealed valves.
20. The **final design** shall include a hazard and operability review of the completed design. A copy of the review and a list of the recommendations shall be filed with the Secretary.
21. The **final design** shall specify that the LNG tank carbon-steel piping support plates and connections to piping supports will be designed to ensure that corrosion protection is adequately provided. In addition, provisions for corrosion monitoring and maintenance of carbon-steel attachments are to be included in the design and maintenance procedures.
22. The **final design** of the tank foundation shall include an inclinometer, instrumented to record and display tank settlement, and a minimum of eight permanent reference points, equally spaced around the base for elevation survey measurement.
23. The **final design** shall include details of the LNG tank tilt settlement and differential settlement limits between the LNG tank and piping, and the procedures to be implemented in the event that limits are exceeded.
24. The **final design** shall include detailed drawings of the LNG tank roof spill control system.
25. The **final design** shall specify that the high-high shutdown for LNG tank overfill protection will be provided by the high-level shutdown instrument LSHH-51133 or any combination of high level and high-high level from the other level instruments.
26. The **final design** shall specify that the operating pressure at the suction flange to each boil-off compressor will be not less than 0.2 psig when both compressors are operating and the tank is at the minimum pressure for boil-off compressor operation.
27. The **final design** shall include a recycle line from the top of the sendout pump suction header to storage.
28. The **final design** shall specify that the nitrogen purge line to the boost pump vessel and boost pump discharge line is rated for the same pressure and temperature conditions as the boost pump discharge piping.
29. The **final design** shall specify that the first isolation valve at the inlet to the sendout pumps will be a weld-end shutoff valve.
30. The **final design** shall include provisions to drain and purge the LNG inlet piping to the vaporizer, to a safe location.

31. The **final design** shall specify that the LNG isolation valve from the inlet header to the vaporizer will be a weld-end shutoff valve, operated by the safety instrumented system (SIS).

32. The **final design** shall specify that the vaporizer discharge valve to the outlet header will be a weld-end shutoff valve, operated by the SIS.

33. The **final design** shall include a pilot relief valve or operated vent valve sized for thermal relief at the discharge of each vaporizer, upstream of the isolation valves.

34. The **final design** shall include a shutoff valve upstream of FV-51506. The shutoff valve shall provide high-pressure protection for the UGI distribution system and be operated through the SIS and actuated by signal from PT-91706.

35. The **final design** shall specify that all drains from LNG systems will be equipped with double isolation and bleed valves.

36. The **final design** shall specify that LNG vent and drain lines will not discharge directly into the vent stack header.

37. The **final design** shall include an isolation valve upstream of the fuel gas flow orifice to each vaporizer and a vent valve between the isolation valve and the flow orifice.

38. The **final design** shall specify that for LNG and natural gas service, branch piping and piping nipples less than 50 mm (2 inches) will be no less than schedule 160.

39. The **final design** shall provide P&IDs, specifications, and procedures that clearly show and specify the tie-in details required to safely connect the proposed facilities.

40. The layout and elevation drawings of the process equipment that are appropriate for the proposed operation and maintenance of the facility shall be included in the **final design** and filed with the Secretary at the time that the engineering, procurement and construction contractor issues the drawing for review. This milestone shall be included in the project schedule.

41. The **final design** shall specify that, in addition to meeting the electrical design and installation code requirements for the Class 1, Group D hazardous area classification of the liquefaction exchanger areas, LNG pump area, LNG vessels, and vaporizer LNG inlet and outlet piping areas, the operating and maintenance procedures will be in accordance with Class 1, Group D, Division 1.

42. The **final design** shall include details of the air gaps that will be installed downstream of all seals or isolations installed at the interface between a flammable fluid system and an electrical conduit or wiring system. Each air gap shall vent to a safe location and be equipped with a leak detection device that

will: continuously monitor for the presence of a flammable fluid; alarm the hazardous condition; and shutdown the appropriate systems.

43. The **final design** of the hazard detection equipment shall identify the manufacturer and model.

44. The **final design** shall specify that all hazard detection equipment will include redundancy, fault detection, and fault alarm monitoring in all potentially hazardous areas and enclosures.

45. The **final design** of the fixed and wheeled dry-chemical, fire extinguishing, and high-expansion foam hazard control equipment shall identify the manufacturer and model.

46. The **final design** shall include an updated fire protection evaluation carried out in accordance with the requirements of NFPA 59A 2001, chapter 9.1.2.

47. The **final design** of the firewater system shall include provisions to measure and record the discharge flow and pressure from the firewater pump.

48. The **final design** shall include an uninstalled spare firewater jockey pump.

49. The **final design** shall include provisions for the distributed control system (DCS) to continually monitor the pressure of the city water main and alarm in the event the pressure falls below 50 psig. UGI LNG shall report low-pressure alarms to the Commission. The set pressure of the alarm may be modified by the Director of OEP in accordance with operating experience.

50. The **final design** shall include firewater piping specifications for the complete firewater system. The design pressure of the high-pressure piping system shall be greater than the maximum discharge pressure of the firewater pumps under all conditions.

51. The **final design** shall include details of the shutdown logic, including cause-and-effect matrices for alarms and shutdowns.

52. The **final design** shall specify that all emergency shutdown valves will be equipped with open and closed position switches connected to the DCS/SIS.

53. The **final design** shall include emergency shutdown of equipment and systems activated by hazard detection devices for flammable gas, fire, and cryogenic spills, when applicable.

54. The maintenance procedures to be filed **prior to commissioning** shall state that a foundation elevation survey of all LNG tanks will be conducted on an annual basis.

55. All valves, including drain, vent, main, and car-sealed or locked valves shall be tagged in the field during construction and **prior to commissioning**.

56. The car seal procedure and car seal control logs for all valves shall be provided **prior to commissioning**, and completed logs shall be submitted to the Commission with semi-annual reports.

57. A tabulated list of the proposed hand-held fire extinguishers shall be filed **prior to commissioning**. The information shall include a list with the equipment number, type, size, number, and location. Plan drawings shall include the type, size, and number of all hand-held fire extinguishers.

58. Operation and maintenance procedures and manuals, as well as safety procedure manuals, shall be filed **prior to commissioning**.

59. The operation and maintenance procedures provided **prior to commissioning** shall state that LNG filters are not to be opened unless the unit can be completely depressured when isolated.

60. The contingency plan for failure of the LNG tank outer containment shall be filed **prior to commissioning**.

61. A copy of the criteria for horizontal and rotational movement of the inner tank for use during and after cool down shall be filed **prior to commissioning**.

62. Progress on construction of the project shall be reported in **monthly** reports filed with the Secretary. Details shall include a summary of activities, projected schedule for completion, problems encountered, and remedial actions taken. Problems of significant magnitude shall be reported to the FERC within 24 hours.

The following measures shall apply throughout the life of the facility:

63. The facility shall be subject to regular Commission staff technical reviews and site inspections on at least a **biennial basis**, or more frequently as circumstances indicate. Prior to each Commission staff technical review and site inspection, the Company shall respond to a specific data request, including information relating to possible design and operating conditions that may have been imposed by other agencies or organizations. Up-to-date detailed piping and instrumentation diagrams reflecting facility modifications and provision of other pertinent information not included in the semi-annual reports described below, including facility events that have taken place since the previously submitted annual report, shall be submitted.

64. **Semi-annual** operational reports shall be filed with the Secretary to identify changes in facility design and operating conditions, abnormal operating experiences, activities (including quantity and composition of LNG, vaporization quantities, boil-off/flash gas, etc.), and plant modifications, including future plans and progress thereof. Abnormalities shall include, but not be limited to: storage tank stratification or rollover, geysering, storage tank pressure excursions, cold spots on the storage tanks, storage tank vibrations and/or

vibrations in associated cryogenic piping, storage tank settlement, significant equipment or instrumentation malfunctions or failures, non-scheduled maintenance or repair (and reasons therefore), relative movement of storage tank inner vessels, vapor or liquid releases, fires involving natural gas and/or from other sources, negative pressure (vacuum) within a storage tank and higher-than-predicted boil-off rates. Adverse weather conditions and the effect on the facility shall also be reported. Reports shall be submitted **within 45 days** after each period ending **June 30 and December 31**. In addition to the above items, a section entitled "Significant plant modifications proposed for the next 12 months (dates)" shall also be included in the semi-annual operational reports. Such information would provide the Commission staff with early notice of anticipated future construction/maintenance projects at the LNG facility.

65. In the event the temperature of any region of any secondary containment, including imbedded pipe supports, becomes less than the minimum specified operating temperature for the material, the Commission shall be notified **within 24 hours**, and procedures for corrective action shall be specified.

66. Significant non-scheduled events, including safety-related incidents (i.e., LNG or natural gas releases, fires, explosions, mechanical failures, unusual over pressurization, and major injuries) and security-related incidents (i.e., attempts to enter site, suspicious activities) shall be reported to Commission staff. In the event an abnormality is of significant magnitude to threaten public or employee safety, cause significant property damage, or interrupt service, notification shall be made **immediately**, without unduly interfering with any necessary or appropriate emergency repair, alarm, or other emergency procedure. In all instances, notification shall be made to Commission staff **within 24 hours**. This notification practice shall be incorporated into the LNG facility's emergency plan. Examples of reportable LNG-related incidents include:

    a. fire;

    b. explosion;

    c. estimated property damage of $50,000 or more;

    d. death or personal injury necessitating in-patient hospitalization;

    e. free flow of LNG that results in pooling;

    f. unintended movement or abnormal loading by environmental causes, such as an earthquake, landslide, or flood, that impairs the serviceability, structural integrity, or reliability of an LNG facility that contains, controls, or processes gas or LNG;

g. any crack or other material defect that impairs the structural integrity or reliability of an LNG facility that contains, controls, or processes gas or LNG;

h. any malfunction or operating error that causes the pressure of a pipeline or LNG facility that contains or processes gas or LNG to rise above its maximum allowable operating pressure (or working pressure for LNG facilities) plus the build-up allowed for operation of pressure limiting or control devices;

i. a leak in an LNG facility that contains or processes gas or LNG that constitutes an emergency;

j. inner tank leakage, ineffective insulation, or frost heave that impairs the structural integrity of an LNG storage tank;

k. any condition that could lead to a hazard and cause a 20% reduction in operating pressure or shutdown of operation of a pipeline or an LNG facility;

l. safety-related incidents with LNG trucks at or en route to and from the LNG facility; or

m. an event that is significant in the judgment of the operator and/or management even though it did not meet the above criteria or the guidelines set forth in an LNG facility's incident management plan.

In the event of an incident, the Director of OEP has delegated authority to take whatever steps are necessary to ensure operational reliability and to protect human life, health, property, or the environment, including authority to direct the LNG facility to cease operations. Following the initial company notification, Commission staff would determine the need for an on-site inspection by Commission staff, and the timing of an initial incident report (normally within 10 days) and follow-up reports.