

KING & SPALDING

King & Spalding LLP
1180 Peachtree Street, NE
Suite 1600
Atlanta, GA 30309
Tel: +1 404 572 4600
Fax: +1 404 572 5100
www.kslaw.com

Tyler R. Brown
Counsel
Direct Dial: +1 404 572 2809
trbrown@kslaw.com

September 12, 2023

VIA ELECTRONIC FILING

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

RE: Golden Triangle Storage, LLC, Docket No. CP23-_____
Abbreviated Application for Certificate of Public Convenience and Necessity,
Reaffirmation of Market-Based Rate Authority, and Related Authorizations

Dear Secretary Bose:

With this letter, I submit for filing on behalf of Golden Triangle Storage, LLC (“GTS”) to the Federal Energy Regulatory Commission (“Commission”) an Abbreviated Application for Certificate of Public Convenience and Necessity, Reaffirmation of Market-Based Rate Authority, and Related Authorizations (the “Application”). Specifically, GTS requests in the Application, pursuant to Section 7(c) of the Natural Gas Act, as amended (“NGA”),¹ and 18 C.F.R. Part 157,² that the Commission issue an order granting GTS:

1. A certificate of public convenience and necessity authorizing the expansion of GTS’ existing natural gas storage facility in Jefferson County, Texas (the “Existing Storage Facilities”), through the construction and operation of two new salt dome storage caverns, additional compression, a new brine disposal well and related brine pipeline, and appurtenant facilities (the “Expansion Project”);
2. Reaffirmation of GTS’ existing market-based rate authorization to reflect the additional storage capacity and deliverability made available through the Expansion Project; and

¹ 15 U.S.C. § 717f(c).

² 18 C.F.R. Part 157 (2022).

Secretary Kimberly D. Bose
September 12, 2023
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3. Related authorizations and waivers and any other waiver, authority, and further relief that may be necessary in order to grant the authorizations requested.

In accordance with Sections 388.112 and 388.113 of the Commission's regulations, 18 C.F.R. §§ 388.112 and 388.113, GTS has separated the volumes submitted herein into a volume containing "Public" information, a volume containing "Privileged (PRIV)" information, and a volume containing "Critical Energy Infrastructure Information (CEII)." The enclosed Application consists of the following documents and materials, organized by volume:

Volume I: Public

- Transmittal Letter
- Abbreviated Application for Certificate of Public Convenience and Necessity, Reaffirmation of Market-Based Rate Authority, and Related Authorizations
- Public version of Exhibits to the Application as required by Commission regulations
- Verification
- Form of Notice suitable for publication in the Federal Register

Volume II: Contains Privileged Information – Do Not Release

- Privileged version of Exhibit F-I

Volume III: Contains Critical Energy/Electric Infrastructure Information - Do Not Release

- CEII portions of Exhibit F-I
- Exhibits G and G-II

Pursuant to Section 388.112 of the Commission's regulations,³ GTS hereby requests Volume II be treated as Privileged, and that it not be released to the public. Information in Volume II is privileged and confidential because it contains cultural resource information and landowner information. Accordingly, Volume II has been labelled "**Contains Privileged Information – Do Not Release**".

Pursuant to Section 388.113 of the Commission's regulations, GTS requests that Volume III provided herein be treated as CEII, and that it not be released to the public. Volume III contains information including flow diagrams and detailed design information, the disclosure of which could adversely impact safety and security. Accordingly, Volume III has been labelled "**Contains Critical Energy/Electric Infrastructure Information - Do Not Release**".

³ 18 C.F.R. § 388.112.

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If you have any questions, please contact me at 404-572-2809.

Sincerely,

/s/Tyler R. Brown
Tyler R. Brown

Counsel for Golden Triangle Storage, LLC

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Golden Triangle Storage, LLC) **Docket No. CP23-__-000**

**ABBREVIATED APPLICATION OF GOLDEN TRIANGLE STORAGE, LLC
FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY,
REAFFIRMATION OF MARKET-BASED RATE AUTHORITY,
AND RELATED AUTHORIZATIONS**

EXPANSION PROJECT

James F. Bowe, Jr.
King & Spalding LLP
1700 Pennsylvania Avenue, NW
Suite 900
Washington, DC 20006
Tel: +1 202 626-9601
jbowe@kslaw.com

Amy Johnson
Director of Regulatory
Golden Triangle Storage, LLC
919 Milam Street, Suite 2425
Houston, Texas 77002
Tel: (832) 753- 4803
ajohnson@calichestorage.com

Tyler R. Brown
King & Spalding LLP
1180 Peachtree Street, NE
Suite 1600
Atlanta, GA 30309
Tel: 404 572-2809
trbrown@kslaw.com

VOLUME I – PUBLIC

Filed September 12, 2023

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UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Golden Triangle Storage, LLC) **Docket No. CP23-___-000**

**ABBREVIATED APPLICATION OF GOLDEN TRIANGLE STORAGE, LLC
FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY,
REAFFIRMATION OF MARKET-BASED RATE AUTHORITY,
AND RELATED AUTHORIZATIONS**

Pursuant to Section 7(c) of the Natural Gas Act, as amended (“NGA”),¹ and Part 157 of the regulations of the Federal Energy Regulation Commission (“FERC” or “Commission”),² Golden Triangle Storage, LLC (“GTS”) hereby submits this abbreviated application (“Application”) requesting that the Commission issue an order granting the following:

1. A certificate of public convenience and necessity pursuant to 18 C.F.R. Part 157, Subpart A, authorizing the expansion of GTS’ existing natural gas storage facility in Jefferson County, Texas (the “Existing Storage Facilities”), through the construction and operation of two new salt dome storage caverns, additional compression, a new brine disposal well and related brine pipeline, and appurtenant facilities (the “Expansion Project”);
2. Reaffirmation of GTS’ existing market-based rate authorization to reflect the additional storage capacity and deliverability made available through the Expansion Project; and
3. Related authorizations and waivers and any other waiver, authority, and further relief that may be necessary in order to grant the authorizations requested.

GTS is undertaking the Expansion Project to meet demonstrated market demand for natural gas storage in the Gulf Coast region. The Expansion Project will add

¹ 15 U.S.C. § 717f(c).

² 18 C.F.R. Part 157 (2022).

approximately 14.4 billion cubic feet (Bcf) of new natural gas storage capacity to the Existing Storage Facilities, as well as an incremental 442 MMcf/day of injection capability and 860 MMcf/day of withdrawal capability.

The Expansion Project will include the development, construction, installation, and operation of: (i) two new salt dome natural gas storage caverns (“Cavern 3” and “Cavern 4”); (ii) well pad sites for Cavern 3 and Cavern 4; (iii) appurtenant facilities related to Cavern 3 and Cavern 4; (iv) six spark-ignited reciprocating piston driven compressor units and related equipment at the existing GTS “Central Compressor Station;” (v) a new brine disposal well and brine disposal pipeline; and (vi) new service corridors and permanent access roads. Most of the Expansion Project will be built within the existing boundaries of GTS’ ninety (90) acre “Central Storage Site,” a site which GTS controls through a long-term lease.

As demonstrated in this Application, the benefits of the Expansion Project outweigh any potential adverse impacts, which have been, or will be, significantly mitigated through GTS’ efforts. Therefore, the Expansion Project is in the public interest and is required by the public convenience and necessity.

GTS respectfully requests that the Commission issue the authorizations and waivers requested in this Application by May 1, 2024, so that GTS will be able to commence construction on a timely basis and place portions of the Expansion Project into service by April 1, 2026.

As support for this Application, and pursuant to the Commission’s regulations, GTS respectfully submits the following:

I.
IDENTITY OF APPLICANT AND COMMUNICATIONS

Applicant's full name is Golden Triangle Storage, LLC. It is a Delaware limited liability company with its principal office at 919 Milam Street, Suite 2425, Houston, Texas 77002. All of the membership interests of GTS are owned by Caliche Development Partners II, LLC ("Caliche"), a Delaware limited liability company. Caliche is owned by Orion Infrastructure Capital (99%) and Caliche Management II, LLC (1%), both of which are privately-held investment firms.

The names, titles and mailing addresses of the persons to whom correspondence concerning this Application should be addressed are as follows:

James F. Bowe, Jr.
King & Spalding LLP
1700 Pennsylvania Avenue, NW
Suite 900
Washington, DC 20006
Tel: +1 202 626-9601
jbowe@kslaw.com

*Amy Johnson
Director of Regulatory
Golden Triangle Storage, LLC
919 Milam Street, Suite 2425
Houston, Texas 77002
Tel: (832) 753- 4803
ajohnson@calichestorage.com

*Tyler R. Brown
King & Spalding LLP
1180 Peachtree Street, NE
Suite 1600
Atlanta, GA 30309
Tel: 404 572-2809
trbrown@kslaw.com

- * Persons designated to receive service pursuant to 18 C.F.R. § 385.203(b)(3) of the Commission's Rules of Practice and Procedure.

II. EXISTING OPERATIONS; BACKGROUND

GTS is a “natural-gas company” within the meaning of Section 2(6) of the NGA, and as such is subject to the jurisdiction of the Commission. GTS provides natural gas storage services in interstate commerce under the terms of its FERC Gas Tariff (the “Tariff”).

The Commission granted GTS a certificate of public convenience and necessity to construct and operate the Existing Storage Facilities in 2007.³ The Expansion Project is similar in scope to a project filed by GTS which FERC approved on January 19, 2012, in Docket No. CP11-531-000, but which has not been constructed.⁴ Background on the Existing Storage Facilities and the 2012 Project is provided below.

A. Existing Storage Facilities

On December 31, 2007, the Commission issued to GTS a certificate of public convenience and necessity authorizing the construction and operation of a natural gas storage facility and associated pipeline facilities in Jefferson and Orange Counties, Texas, *i.e.* what would become the Existing Storage Facilities.⁵ The Existing Storage Facilities include two high-deliverability underground salt cavern storage caverns (“Cavern 1” and “Cavern 2”) located at the Central Storage Site. The Existing Storage Facilities also include: (i) a compressor facility, *i.e.*, the Central Compressor Station, which includes three compressors capable of generating a total of 14,205 horsepower located on the Central

³ *Golden Triangle Storage, Inc.*, 121 FERC ¶ 61,313 (2007) (“2007 Certificate Order”); *Golden Triangle Storage, Inc.*, 132 FERC ¶ 61,101 (2010), *order on reh’g*, 134 FERC ¶ 61,036 (2011).

⁴ *Golden Triangle Storage, Inc.*, 138 FERC ¶ 61,036 (2012) (“2012 Certificate Order”) (authorizing GTS to construct and operate two additional caverns at the Existing Storage Facilities (the “2012 Project”).

⁵ 2007 Certificate Order at P 2.

Storage Site; (ii) a 9.1-mile dual natural gas pipeline header system that extends from the Central Storage Site northeast into Orange County, Texas, with bi-directional meter stations that interconnect the header system with four interstate and three intrastate natural gas pipeline systems (the “Pipeline Header”); and (iii) cavern leaching and brine disposal facilities. All facilities comprising the Existing Storage Facilities are described in Exhibit F-I to this Application, in Resource Report 1, Table 1.1-2.

The 2007 Certificate Order indicated that Cavern 1 and Cavern 2 each would have working gas storage capacity of 8.0 billion cubic feet (“Bcf”) and cushion gas capacity of 4.24 Bcf.⁶ The Existing Storage Facilities also have injection capability of 300 MMcf per day and withdrawal capability of 600 MMcf per day.⁷

GTS placed Cavern 1 into service on June 16, 2010, albeit at capacities that were less than the maximum certificated capacities for the cavern specified in the 2007 Certificate Order. GTS placed Cavern 2 into service on June 16, 2012, also at initial capacities that were less than the maximum certificated capacities for the cavern authorized in the 2007 Certificate Order.

Since placing Cavern 1 and Cavern 2 into service, GTS has annually filed storage capacity increase reports in accordance with the 2007 Certificate Order.⁸ GTS recently notified the Commission that Cavern 1 has a cushion gas capacity of approximately 3.07

⁶ See 2007 Certificate Order at P 4.

⁷ GTS has filed with the Commission to increase the injection and withdrawal capability of the Existing Storage Facilities. See *infra* Section IV.

⁸ GTS has filed, and the Commission has granted, three requests for additional time to complete rewatering cycles to increase the capacities of Storage Cavern 1 and Storage Cavern 2 to their maximum certificated capacities. On October 29, 2021, the Company requested that FERC grant a third extension of time, until December 31, 2024, to increase the Cavern 1 and Cavern 2 to their maximum certificated capacities. FERC granted the request for an extension by letter order issued January 11, 2022. See *Golden Triangle Storage, Inc.*, Docket Nos. CP07-414-000, CP07-415-000, and CP07-416-000, Letter Order (Jan. 11, 2022).

Bcf and working gas capacity of approximately 7.04 Bcf.⁹ Cavern 2 has been solution mined to approximately 11 million barrels total volume, with cushion gas capacity of approximately 3.9 Bcf and working gas capacity of approximately 7.8 Bcf.¹⁰

On the basis of the environmental assessment prepared for the 2007 Certificate Order, the Commission concluded that, “approval of the proposed project would not constitute a major federal action significantly affecting the quality of the human environment.”¹¹ In the 2007 Certificate Order, the Commission also granted GTS authorization to charge market-based rates for firm and interruptible storage and hub (parking, loaning and balancing) services provided through Cavern 1 and Cavern 2, finding that GTS “will lack market power.”¹²

B. The 2012 Project

On January 19, 2012, the Commission issued to GTS a certificate of public convenience and necessity authorizing the construction and operation of the 2012 Project, *i.e.*, two additional natural gas storage caverns, Cavern 3 and Cavern 4, at the Central Storage Site. GTS did not propose to construct any additional compression as part of the 2012 Project. In the 2012 Certificate Order, the Commission concluded that, “approval of this proposal would not constitute a major federal action significantly affecting the quality of the human environment.”¹³ The Commission also granted GTS authorization to charge

⁹ See Golden Triangle Storage, LLC, Partial Refilling and Storage Capacity Increase Report for the Calendar Year 2022, Docket Nos. CP07-414-000, CP07-415-000, and CP07-416-000 (filed Mar. 31, 2023).

¹⁰ See Golden Triangle Storage, Inc., Partial Refilling and Storage Capacity Increase Report for the Calendar Year 2021, Docket Nos. CP07-414-000, CP07-415-000, and CP07-416-000 (filed Feb. 23, 2022).

¹¹ 2007 Certificate Order at P 67.

¹² 2007 Certificate Order at P 33.

¹³ 2012 Certificate Order at P 30.

market-based rates for firm and interruptible storage and hub (parking, loaning and balancing) services to be provided through Cavern 3 and Cavern 4, finding that GTS lacked market power in the relevant market area.¹⁴

GTS sought, and the Commission granted,¹⁵ an extension of time until and including December 31, 2017, to complete construction of the 2012 Project. On December 20, 2017, FERC denied GTS' request for an additional extension of time to complete construction of the 2012 Project.¹⁶ Accordingly, GTS' certificate of public convenience and necessity authorizing construction of the 2012 Project expired on December 31, 2017.

The 2012 Project was not built because GTS never entered into long-term precedent agreements supporting development of the 2012 Project. In contrast, the Expansion Project that is the subject of this Application will be supported by long-term precedent agreements.

III. DESCRIPTION OF THE EXPANSION PROJECT

GTS is seeking to expand the Existing Storage Facilities through construction of the Expansion Project. The Expansion Project will add to the Existing Storage Facilities 14.4 Bcf of working gas capacity, 442 MMcf/day of injection capability, and 860 MMcf/day withdrawal capability.

The Expansion Project facilities are described further below:

A. Cavern 3 and Cavern 4

The Expansion Project includes development of Cavern 3 and Cavern 4 at the existing Central Storage Site. GTS requires no additional land rights beyond those it holds

¹⁴ See 2012 Certificate Order at PP 21-22.

¹⁵ *Golden Triangle Storage, Inc.*, Docket No. CP11-531-000, Letter Order (Dec. 18, 2014).

¹⁶ *Golden Triangle Storage, Inc.*, Docket No. CP11-531-000, Letter Order (Dec. 20, 2017).

within the Central Storage Site to construct the new caverns. GTS will create Cavern 3 and Cavern 4 by solution mining using raw water sourced from the nearby Lower Neches Valley Authority Canal. Once completed, Cavern 3 will have working gas capacity of 8.2 Bcf and Cavern 4 will have working gas capacity of 6.2 Bcf. The cavern sites will include: (1) two wellheads, with associated valves, for solution mining and natural gas injections/withdrawals; (2) piping, electrical and instruments (discussed below); and (3) permanent well pads. GTS anticipates that portions of the Expansion Project will be placed in service April 1, 2026. During operation, the Cavern 3 well pad will occupy 0.7 acres and the Cavern 4 well pad will occupy 0.5 acres, all within the existing Central Storage Site.

B. Central Compressor Station

GTS proposes to add six compressors to the existing Central Compressor Station located at the Central Storage Site. Each compressor will be a natural gas-driven reciprocating piston engine-drive unit that will be rated at 5,500 hp. The additional compressors proposed as part of the Expansion Project are required for injection and withdrawal of natural gas to and from Cavern 3 and Cavern 4 and the Pipeline Header at increased rates of flow.

C. Service Corridors and Access Roads for Cavern 3 and Cavern 4 within the Central Storage Site

The Expansion Project includes construction of two new service corridors within the Central Storage Site. The service corridors will connect with the well pads serving Cavern 3 and Cavern 4 and will connect Cavern 3 and Cavern 4 with other existing facilities. Within the service corridors, GTS proposes to install two 12-inch diameter raw water lines (one to each new Cavern); two 16-inch diameter brine return lines (one to each

new Cavern); two 20-inch diameter gas pipelines (one to each new Cavern); a 2-inch air line to each Cavern; and two electrical multi-conduit duct banks (one to each new Cavern).

The Expansion Project will require construction of two new access roads, each 25 feet in width, within the Central Storage Site. The two new permanent access roads will facilitate access to Cavern 3. Access to Cavern 4 will be provided through existing access roads.

D. Brine Disposal Well, Pipeline and Access Road

The Expansion Project includes a proposed new brine disposal well, associated disposal pipeline, and an access road. Each of these facilities will be located approximately 2 miles west of the Central Storage Site and will tie into GTS' existing brine disposal line (also located off the Central Storage Site). These facilities will be located on property that GTS leases for brine disposal associated with its Existing Storage Facilities. The brine disposal well pad will occupy approximately 0.5 acre and will be served by approximately 2,000 feet of new permanent access road and 2,000 feet of new 16-inch brine disposal pipeline. The new brine disposal well and associated disposal line and access road are the only part of the Expansion Project located outside the Central Storage Site.

E. Non-Jurisdictional Facilities

The Expansion Project also requires construction of new non-jurisdictional facilities including upgrades to power and data communication lines and an existing electrical substation, all owned and operated by an affiliate of Entergy Corporation. The communication lines and electrical substation to be upgraded are located on the Central Storage Site.

IV. RELATED APPLICATIONS

GTS has no other applications related to this application that “must be or [are] to be filed by” GTS.¹⁷ GTS is not required to file any other application with the Commission for authorization to undertake the construction and operation of the facilities described in this Application. In addition to the FERC authorizations requested in this Application, GTS will file applications for other required federal, state, and local authorizations for the Expansion Project; a listing of such authorizations is set forth in Exhibit F-I, Resource Report 1, Table 1.10-1.

While GTS has no other applications for a certificate of public convenience and necessity currently pending before this Commission that are related to this Application, GTS does have pending before the Commission an application for a certificate of public convenience and necessity related to Cavern 1 and Cavern 2 at the Existing Storage Facilities. This application is unrelated to the Expansion Project discussed in this Application.

On July 14, 2023, GTS requested that the Commission amend GTS’ certificate authorizing construction and operation of existing Cavern 1 and Cavern 2 to permit GTS to (1) withdraw natural gas from Cavern 1 and Cavern 2 at a rate of as much as 680 million cubic feet (MMcf) per day, instead of the 600 MMcf/day maximum withdrawal rate specified in GTS’ existing certificate; and (2) inject natural gas into Cavern 1 and Cavern 2 at a rate of as much as 765 MMcf per day, instead of the currently authorized maximum injection rate of 300 MMcf/day.¹⁸ GTS also requested that the Commission reaffirm its

¹⁷ See 18 C.F.R. 157.6(b)(5).

¹⁸ See Golden Triangle Storage, LLC, Abbreviated Application for Amendment of Certificate of Public Convenience and Necessity to Increase Storage Facility Withdrawal and Injection Rates and

determination that even with the increases in its authorized maximum daily withdrawal and injection rates for Cavern 1 and Cavern 2, GTS lacks market power over the provision of natural gas storage and related service and should be authorized to charge market-based rates for the storage and related services it offers from Cavern 1 and Cavern 2.¹⁹

The July 2023 Application does not “directly and significantly affect”²⁰ this Application. The increase in withdrawal and injection capability for Cavern 1 and Cavern 2 will require no construction by GTS, and the Commission has already determined that there would be “[n]o environmental impact involved with the approval of” the increase in withdrawal and injection capability.²¹ Once the Commission acts on the July 2023 Application, GTS will be able to increase the injection and withdrawal capability for Cavern 1 and Cavern 2 immediately with the compression it currently has in place at the Existing Storage Facilities. Thus the increased injection and withdrawal rates for which GTS has separately sought authorization will be achievable, whether the additional compression proposed as part of the Expansion Project is built or not. Consequently, the Commission can, and should, act on the July 2023 Application independently of the present Application and need not defer the commencement of its review of this Application until it has acted on the July 2023 Application.

for Reaffirmation of Authorization to Charge Market-Based Rates, Docket No. CP23-511-000 (July 14, 2023) (“July 2023 Application”).

¹⁹ See July 2023 Application at 2.

²⁰ 18 C.F.R. § 157.14(A)(5).

²¹ Golden Triangle Storage, LLC, Environmental Assessment Report, Docket No. CP23-511-000 (July 26, 2023).

V. OPEN SEASON

In order to evaluate market interest in the capacity to be offered by the Expansion Project, GTS held a non-binding open season from May 16, 2023, to June 16, 2023, that was posted on GTS' electronic bulletin board, announced via a press release, and advertised in Platts Gas Daily, Platts Megawatt Daily, RBN Energy, and on LinkedIn. The open season materials are included herewith in Exhibit Z-2. GTS received bids from ten (10) unaffiliated parties for more than two times the offered quantity of firm capacity. Guided by the criteria set forth in the open season materials, GTS is currently negotiating, and anticipates executing in the coming weeks, long-term binding precedent agreements with two unaffiliated parties for 14 Bcf of new firm working gas storage capacity that will be available from Cavern 3 and Cavern 4. Once executed, GTS will file the precedent agreements with the Commission. These precedent agreements will document that there is existing and pressing market demand for the Expansion Project.²²

²² Under its Certificate Policy Statement, the Commission views agreements for long-term firm capacity as significant evidence of market demand and a demonstrated need for the project. *Certificate of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227, at p. 61,748 (1999), *order on clarification*, 90 FERC ¶ 61,128 (2000), *order on clarification*, 92 FERC ¶ 61,094 (2000) (“Certificate Policy Statement”) (stating that executed precedent agreements “constitute significant evidence of demand for the project”); *see also Double E Pipeline, LLC*, 173 FERC ¶ 61,074 at P 34 (2020) (“Precedent agreements are significant evidence of demand for a project.”); *Myersville Citizens for a Rural Cmty. v. FERC*, 783 F.3d 1301, 1311 (D.C. Cir. 2015) (*quoting Minisink Residents for Env'tl. Pres. & Safety v. FERC*, 762 F.3d 97, 111 n.10) (“Petitioners identify nothing in the policy statement or in any precedent construing it to suggest that it requires, rather than permits, the Commission to assess a project’s benefits by looking beyond the market need reflected by the applicant’s existing contracts with shippers”).

VI.
PUBLIC CONVENIENCE AND NECESSITY – THE EXPANSION PROJECT
SATISFIES ALL CERTIFICATE POLICY STATEMENT REQUIREMENTS

NGA Section 7(c) provides that the Commission shall issue a certificate to any qualified applicant if it finds that the construction and operation of a proposed project “is or will be required by the present or future public convenience and necessity.”²³ The Commission evaluates projects to determine whether they are required by the public convenience and necessity by applying criteria established in the Certificate Policy Statement.

In accordance with the Certificate Policy Statement, the Commission first will evaluate whether a project proposal would require existing customers to provide a financial subsidy for the project. It then considers whether the applicant has eliminated or minimized any adverse impacts the project might have on: (1) the applicant’s existing customers; (2) existing pipelines in the market and their captive customers; and (3) landowners and communities affected by the proposed project.²⁴ Any adverse impacts are balanced against the anticipated benefits from the project, such as meeting a demonstrated need for the project.²⁵ The Commission accepts precedent agreements with prospective customers for long-term firm service as the principal factor in demonstrating project need.²⁶ If the applicant demonstrates that the benefits to be achieved by a project will outweigh the

²³ 15 U.S.C. § 717f(e).

²⁴ Certificate Policy Statement at 61,745.

²⁵ Certificate Policy Statement at 61,748.

²⁶ *See id.* (stating that executed precedent agreements “constitute significant evidence of demand for the project”).

potential effects and that the applicant has attempted to minimize any adverse effects, the Commission will find that the project is required by the public convenience and necessity.²⁷

The Expansion Project satisfies each of the criteria specified in the Certificate Policy Statement. It will meet documented market demand for increased storage capacity, enhance operational capabilities at the Existing Storage Facilities, and ensure that GTS will be able to continue to offer safe, reliable storage services for both existing and new customers. The Expansion Project will do so in a manner that does not require subsidies from its existing customers, will not adversely impact pipelines existing in the market or their captive customers, and will minimize impacts on landowners and communities hosting and surrounding the Expansion Project. The Expansion Project is, therefore, needed, and its construction and operation will advance the public interest. The Expansion Project is required by the public convenience and necessity.

A. The Expansion Project Satisfies the Threshold “No-Subsidy” Requirement.

Under the Certificate Policy Statement, the threshold requirement for existing entities proposing new natural gas facilities construction is that the entity must be prepared to support the project financially without relying on subsidization from existing customers.²⁸ As discussed in this Application, GTS has been authorized by the Commission to charge market-based rates for the services it provides and will continue to meet the requirements for market-based rate authorization even with the addition of Cavern 3 and Cavern 4 (as discussed *infra* in Section VIII). GTS will be fully at risk for recovering

²⁷ See Certificate Policy Statement at 61,746.

²⁸ *Id.*

any costs associated with the Expansion Project, and the Expansion Project meets the threshold non-subsidization requirements established in the Certificate Policy Statement.²⁹

B. The Expansion Project Will Impose No Adverse Effects on Existing GTS Customers, or on Existing Pipelines and Their Captive Customers.

The Certificate Policy Statement requires an analysis to identify potentially adverse effects of a project on the project proponent's existing customers, existing pipelines serving the market and their captive customers, and landowners and communities affected by the proposed construction.³⁰ It also requires the Commission to determine whether the applicant has made efforts to eliminate or minimize those adverse effects.³¹ If residual adverse effects on these groups will remain 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 residual adverse effects."³²

The Expansion Project will result in no impacts to any of GTS' existing customers. Through the Expansion Project, GTS will be increasing its working gas capacity and injection and withdrawal capabilities relative to those provided through the Existing Storage Facilities without reducing any services offered or limiting the capacity available to existing customers. If anything, increasing the withdrawal and injection capabilities available through the Existing Storage Facilities, as the Expansion Project will, can only

²⁹ See *LA Storage, LLC*, 180 FERC ¶ 61,188 at P 19 ("under its market-based rate proposal, LA Storage assumes the economic risks associated with the costs of the project's facilities to the extent that any capacity is unsubscribed. Accordingly, we find that the project has met the threshold no-subsidy requirement of the 1999 Certificate Policy Statement."); *Bluewater Gas Storage, LLC*, 171 FERC ¶ 61,132 at P 14 (2020) ("By charging market-based rates, Bluewater assumes the economic risks associated with the costs of the project's facilities.").

³⁰ Certificate Policy Statement at 61,745.

³¹ *Id.*

³² *Id.*

benefit GTS' existing customers by offering enhanced capabilities to access the Existing Storage Facilities and connecting pipelines, and by improving facilities redundancy and therefore reliability.

As further set forth in Section VIII and Exhibit I, the Existing Storage Facilities are located in a highly competitive geographic market for natural gas storage and related services where numerous storage and hub alternatives exist. After completing the Expansion Project and increasing its working gas capacity, GTS' market share and market concentration for storage and wheeling services will remain low, and GTS will continue to lack the ability to exercise market power in the provision of firm and interruptible storage and wheeling services. Moreover, the proposed increase in capacity associated with the Expansion Project will not involve the displacement of any other market-area storage capacity or otherwise have an adverse impact on existing pipelines in the market or their customers.³³ Thus, through construction of the Expansion Project the GTS customers executing precedent agreements will obtain firm storage services they require, and GTS' existing storage customers will benefit from an increase in the quantity of storage capacity and injection and withdrawal capability potentially available through the GTS facility. At

³³ See, e.g., *LA Storage, LLC*, 180 FERC ¶ 61,188 at P 21 (2022) (finding that because the proposed project will be located in a competitive market, the construction of the proposed project will not involve the displacement of any other market area storage capacity, and the proposed project will enhance storage options available to pipelines and their customers and increase competitive alternatives, there will be no adverse impacts on existing customers or other existing pipelines and their customers); *Spire Storage West LLC*, 179 FERC ¶ 61,123 at P 21 (2022) (finding that because the proposed project will be located in a competitive market and will increase competitive alternatives, and that the proposed increase in storage capacities will not involve the displacement of any other market-area storage capacity, there will be no adverse impacts on existing customers or other existing pipelines and their customers); *D'Lo Gas Storage, LLC*, 166 FERC ¶ 61,102 at P 10 (2019) (finding that because the proposed project will be located in a competitive market and will increase competitive alternatives, it will not adversely affect existing pipelines, storage providers, or their captive customers); *Petal Gas Storage, L.L.C.*, 142 FERC ¶ 61,119 at P 26 (2013) (finding that because the applicants' storage facilities are located in a competitive market area and their proposal does not involve the displacement of any other market-area storage capacity, approval of the proposals will have no adverse impact on existing pipelines in the market or their customers).

the same time, construction and operation of the Expansion Project will not adversely affect existing pipelines operating in the markets GTS serves, and those pipelines' customers will potentially benefit from access to additional storage capacity and increased injection and withdrawal capability.

C. The Expansion Project is Unlikely to Impose Adverse Impacts on Affected Landowners and Communities.

As the accompanying Resource Reports in Exhibit F-I establish, construction and operation of the Expansion Project will impose no substantial adverse impacts on nearby landowners or communities. Those impacts which may remain after GTS has mitigated them to the maximum extent practicable will be limited and generally insignificant.

To minimize disruption to landowners and environmental resources, GTS has designed the Expansion Project to be almost entirely located on the existing, previously disturbed Central Storage Site, a 90-acre property GTS controls under a long-term lease. The Expansion Project is sited in an industrial area that is already well developed and used for natural gas storage. For the facilities of the Expansion Project located off the Central Storage Site, 5.9 acres of land will be temporarily disturbed during construction, while only 3.1 acres will be permanently disturbed once the Expansion Project is in service.

Moreover, construction of the Expansion Project will require the disturbance of a total of only 31.0 acres, resulting in minimal temporary and permanent land disturbance. The Expansion Project will result in permanent impact on a mere 5.2 acres. These limited impacts of the Expansion Project are less than the impacts of other natural gas storage expansion projects approved by the Commission.³⁴

³⁴ See, e.g., *Spire Storage West LLC*, 179 FERC ¶ 61,123 at PP 22-24 (Commission found that the proposed expansion of natural gas storage facilities would have minimal adverse impacts on landowners and surrounding communities where construction of the project would impact 249.01

GTS has implemented an outreach plan by which it will communicate with potential landowners, local communities, various federal, state, and local agencies, and other stakeholders concerning the Expansion Project and its anticipated impacts. On the basis of its experience operating the Existing Storage Facilities for more than a dozen years, GTS anticipates that through this outreach program it will encounter no significant opposition to the Expansion Project from local landowners, communities and regulators. GTS will continue to communicate and work cooperatively with affected landowners, as well as other affected stakeholders, including relevant communities, governments, and agencies, throughout the progression of the Expansion Project to address any concerns they may have and to minimize adverse impacts on landowners and other affected stakeholders.

D. The Project Is Required by the Public Convenience and Necessity.

The benefits of the Expansion Project far outweigh any of the minimal residual adverse effects associated with Expansion Project construction and operation. The Expansion Project is, accordingly, required by the public convenience and necessity.

GTS is committed to developing storage caverns to accommodate the growing demand for natural gas storage, for which its strategic location on the Gulf Coast makes it uniquely well positioned. Since 2010, from the Existing Storage Facilities located in Jefferson County, Texas, GTS has served customers active in several market segments, including natural gas marketers; industrial facilities; local distribution companies; and operators of liquefied natural gas (“LNG”) terminals. In response to informal expressions of interest in additional firm capacity and increased injection and withdrawal capabilities beyond those available through GTS’ Existing Storage Facilities, GTS held a non-binding

acres of land, including 183 acres of land located outside of the existing project boundary.)

open season from May 16, 2023 to June 16, 2023, as discussed in Section V. GTS is currently negotiating binding precedent agreements with customers for 14 Bcf of the Expansion Capacity, and GTS expects that these precedent agreements will be signed in October 2023. The subscription of the expansion capacity, documented by binding precedent agreements resulting from a well-publicized open season, is compelling evidence of the market's need for the Expansion Project.

The Expansion Project will benefit customers beyond those that enter into precedent agreements for new capacity. The Expansion Project will add deliverability and injection capability that will enhance both new and existing customers' ability to move natural gas to and from storage on very short notice and at high rates of flow. High deliverability storage, as the Expansion Project will offer, is often the most economic means of supporting deliveries to highly variable loads. Natural gas storage of the kind offered by GTS plays a critical role in satisfying market requirements during periods of peak demand, interruptions in natural gas production and LNG export operations, and market dislocations. It further provides customers an economical alternative to paying pipeline scheduling and imbalance penalties resulting from customer load swings.

High deliverability salt cavern storage facilities are ideally suited to support the use of variably dispatched gas-fired power generation. As more gas-fired electric generating capacity has come online and pipeline utilization has correspondingly increased, high deliverability natural gas storage has supplemented and can even be substituted for upstream pipeline capacity and flowing gas supply. Moreover, the ability to withdraw large quantities of gas from storage quickly can mitigate the adverse effects of pipeline compressor outages and other temporary capacity constraints that can cause gas price

spikes and require costly fuel switching. In fact, the November 2021 FERC, North American Electric Reliability Corporation, and Regional Entity Staff Report on “The February 2021 Cold Weather Outages in Texas and the South Central United States” recommended additional investments in strategic natural gas storage facilities in and around Texas and recognized that such additional storage capacity could help to stabilize the natural gas market during supply shortfalls.³⁵

The Expansion Project’s storage caverns will be located within GTS’ Existing Storage Facilities, near existing and proposed LNG export terminals along the Gulf Coast. GTS’ highly flexible salt cavern storage facilities will provide valuable operational and commercial support for operators of these terminals and their customers. GTS will be able to accommodate rapid fluctuations in demand for gas at nearby LNG terminals by offering a “sink” for natural gas that temporarily cannot be processed into LNG and exported, as well as a source of gas that can supplement or supplant other sources feeding LNG terminal operations. That is, the Expansion Project’s ability to support high rates of injection and withdrawal will allow LNG terminal operators and their customers to optimize and balance their operations and mitigate the impacts of weather, shipping disruptions, and unplanned outages on both offtakers from and suppliers to LNG export projects.

The Expansion Project will also serve as valuable means of handling temporary mismatches between increased natural gas production and natural gas demand. Continuing increases in oil and gas production in Texas and Louisiana will drive producers and marketers to take advantage of gas storage options to maintain production and delivery

³⁵ *FERC - NERC - Regional Entity Staff Report: The February 2021 Cold Weather Outages in Texas and the South Central United States*, FERC and NERC (Nov. 2021) at 234-235, available at www.ferc.gov/media/february-2021-cold-weather-outages-texas-and-south-central-united-states-ferc-nerc-and.

flexibility. The Expansion Project is well situated to balance growing sources of Texas onshore production, in the Permian Shale, Haynesville Shale, Barnett Shale, Bossier Sands, and Eagle Ford, with variable market demand.

GTS' location on the Spindletop salt dome, south of Beaumont, Texas, ideally positions the Expansion Project to provide increased delivery flexibility, contribute to improved energy security, and enhance the region's existing energy infrastructure. The Expansion Project area has optimal geologic conditions for creating and operating natural gas storage caverns, as proven by the success GTS has had in operating the Existing Storage Facilities for many years. The location also has access to both existing and new natural gas supplies by way of several nearby interstate and intrastate pipeline systems.

Finally, the Expansion Project will impose minimal adverse impacts on landowners and the environment. The majority of the land to be used for the Expansion Project is located within GTS' existing Central Storage Site, on previously disturbed lands, and the portion of the Expansion Project located off the Central Storage Site will be located on a site leased by GTS. Accordingly no new landowners will be affected in any way by the construction and operation of the Expansion Project. As detailed in the accompanying Resource Reports and discussed in Section VII, the Expansion Project also will have minimal impacts on the environment or environmental justice communities.

Thus, FERC approval of the Expansion Project will increase the availability of highly flexible and reliable natural gas storage in the Gulf Coast region, with limited adverse effects on landowners and the environment. The Expansion Project is therefore required by the public convenience and necessity.

VII. ENVIRONMENTAL IMPACTS

GTS is providing in Exhibit F-I to this Application the Resource Reports required by Section 380.12 of the Commission's regulations. These Resource Reports provide the information necessary for the Commission to prepare an environmental analysis of the Expansion Project, consistent with the requirements of the National Environmental Policy Act. As the Resource Reports demonstrate, the environmental impacts associated with the construction and operation of the Expansion Project are not significant and can be adequately mitigated. The Expansion Project therefore will not constitute a major federal action significantly affecting the quality of the environment.

GTS will incorporate industry standard environmental mitigation measures into its construction specifications and commits to implement the FERC Upland Erosion Control, Revegetation, and Maintenance Plan ("FERC Plan")³⁶ and FERC Wetland and Waterbody Construction and Mitigation Procedures ("FERC Procedures")³⁷ as minimum standards to be observed during construction.

GTS will operate and maintain the proposed Expansion Project facilities in compliance with the Commission's guidance in 18 C.F.R. § 380.15. The Expansion Project facilities will be marked, identified, and inspected in accordance with applicable U.S. Department of Transportation regulations at 49 C.F.R. Part 192. The Expansion Project will be constructed in accordance with applicable environmental permits, approvals, and regulations. Thus, the Expansion Project is an environmentally acceptable

³⁶ FERC Upland Erosion Control, Revegetation, and Maintenance Plan ("FERC Plan") (provided in Resource Report 1, Appendix 1-H).

³⁷ FERC Wetland and Waterbody Construction and Mitigation Procedures ("FERC Procedures") (provided in Resource Report 1, Appendix 1-H).

means of satisfying the demand for additional high-deliverability natural gas that now exists in the Gulf Coast region.

Resource Report 1 describes the Expansion Project in detail and documents the purpose of, and need for, the Expansion Project, the land required for its construction and operation, topographic maps depicting the Expansion Project area, and alignment sheets identifying the locations of proposed pipeline facilities. Resource Report 1 also describes the planned construction and restoration methods, identifies permits and authorizations required for construction, and provides support for the geographic scope of the cumulative impacts analysis further discussed in each of the applicable Resource Reports.

Resource Report 2 identifies groundwater, surface water, and wetland resources, and explains why the construction and operation of the Expansion Project will not adversely impact water quality. Wetland surveys were conducted, and will be conducted, for the Expansion Project, and the proposed facilities will avoid wetlands to the extent practicable. Where impacts are unavoidable, GTS will employ industry standard mitigative measures to minimize impacts to wetlands and waterbodies in accordance with U.S. Army Corps of Engineers permitting requirements.

Resource Report 3 demonstrates that construction and operation of the Expansion Project is not expected to adversely impact fish, wildlife, or vegetation resources. There are no perennial waterbodies within the Expansion Project area, and thus no impacts to fisheries or other aquatic resources are anticipated. The Expansion Project may affect, but is not likely to adversely affect, one federal candidate insect species, one federal- and state-listed endangered plant species, and one state-listed threatened reptile species. GTS will implement measures to avoid and minimize potential impacts on federal- and state-listed

threatened, endangered, and candidate species, as provided in Resource Report 3. Therefore, adverse effects of construction and operation of the Expansion Project on fish, wildlife, or vegetation resources are unlikely.

Resource Report 4 provides information on the Expansion Project's cultural resources consultations and investigations conducted for the Existing Storage Facilities and the portion of the Expansion Project that will be located off the Central Storage Site. Resource Report 4 also summarizes consultations with Native American tribes regarding the Expansion Project. GTS will submit requests with the Texas Historical Commission for concurrence with the recommended determination that the Expansion Project will have "no effect" on historic properties. GTS' Unanticipated Discovery Plan for Cultural Resources and Human Remains, which includes procedures to follow in the event that historic properties and/or human remains are encountered during construction, is also included in Resource Report 4.

Resource Report 5 evaluates the impacts of the Expansion Project on local and regional socioeconomic conditions including populations, economic conditions, housing, environmental justice populations, public services, and transportation infrastructure.

With respect to environmental justice communities within the Expansion Project area, the Expansion Project will avoid the disproportionate imposition of any adverse environmental, economic, social, or health impacts on minority and low-income communities. GTS evaluated a five-kilometer radius around the Expansion Project area, and on the basis of this evaluation has concluded that construction and operation of the Expansion Project will not generate significant risk of adverse and disproportionate impact

on the environmental justice communities living within five kilometers of the Expansion Project area.

Resource Report 6 provides an in-depth description of the geology of the Expansion Project area in Jefferson County, Texas. No blasting is anticipated to be required for construction of the Expansion Project and no impacts on quarries, historic mines, or mine spoil areas are anticipated. The Expansion Project is situated in areas of very low seismic activity and the Expansion Project is not anticipated to be adversely impacted by the presence of faults in its vicinity. The low probability of a significant seismic event occurring within the Expansion Project area makes the occurrence of soil liquefaction unlikely. Additionally, GTS does not anticipate that flooding will impact the Expansion Project, that the Expansion Project will decrease available flood storage capacity, or that paleontological resources will be impacted by the Expansion Project. Monitoring plans for subsidence within the salt cavern and well drilling activity in the vicinity of the Expansion Project are also discussed in Resource Report 6.

Resource Report 7 identifies the soil classifications (oil wasteland soil, league clay and urban land) impacted by the Expansion Project. As discussed in Resource Report 7, GTS will utilize industry standard best management practices including sediment and erosion control measures that will be implemented in accordance with the FERC Plan and FERC Procedures, and any necessary revegetation of the Expansion Project area will be implemented in accordance with the FERC Plan and FERC Procedures.

Resource Report 8 classifies the land use impacted by the Expansion Project as industrial/commercial land, agricultural land, and wetlands. Resource Report 8 further quantifies the amount of land, and discusses each land use type, to be affected by the

Expansion Project. The majority of the land impacted by the Expansion Project is industrial/commercial land, since much of the Expansion Project will be conducted on the Central Storage Site.

Resource Report 9 describes the existing air quality and general climatic conditions in the area of the Expansion Project. It discusses construction-related air emissions and noise, which are shown to be typical and minor and therefore are not expected to violate any applicable standard. Resource Report 9 also analyzes the air emissions and noise levels associated with the operation of the new compression associated with the Expansion Project. It identifies the relevant regulatory requirements relating to air emissions and describes how GTS will satisfy such requirements. One noise sensitive area (“NSA”) occurs within 1 mile of the Expansion Project. As detailed in Resource Report 9, computer noise modeling predicts that the noise attributable to operation of the Expansion Project will be below FERC’s requirement of 55 dBA Ldn for all existing and proposed noise sources at nearby NSAs. The greatest calculated sound increase to the ambient noise environment will be 0.2 dBA at the NSA located within 1 mile of the Expansion Project, which is not expected to be noticeable.

Resource Report 10 analyzes the alternatives to the Expansion Project. Resource Report 10 rejects the No-Action Alternative as it would limit customers’ options for increased supplies of natural gas storage. With respect to system alternatives, GTS concluded that there are no other existing or proposed facilities capable of achieving the purposes and benefits of the proposed Expansion Project with environmental impacts as limited as those associated with the Expansion Project. Finally, Resource Report 10 evaluates and justifies GTS’s choice regarding energy and compression alternatives.

Resource Report 11 details the measures that will be implemented to ensure the safety and reliability of the Expansion Project, including constructing, operating, and maintaining the Expansion Project facilities in compliance with the U.S. Department of Transportation's minimum safety standards and reporting requirements and the relevant requirements of the Railroad Commission of Texas for subsurface caverns. These safety standards and reporting requirement are discussed in detail in Resource Report 11.

Resource Report 12 explains that GTS does not expect to encounter polychlorinated biphenyls (PCB) contamination in excess of 50 parts per million (ppm) in pipeline liquids during construction or operation of the Expansion Project.

VIII. REAFFIRMATION OF MARKET-BASED RATE AUTHORITY

GTS requests reaffirmation of its authorization to charge market-based rates for the storage and wheeling services it provides. As discussed above, the Commission determined that GTS lacks market power in the relevant market when the Commission granted GTS' authorization to charge market-based rates for firm and interruptible storage, hub and wheeling services (for Caverns 1, 2, 3, and 4)³⁸ and for firm wheeling services (for Caverns 1, 2, 3, and 4).³⁹

In 2018, the Commission reaffirmed that GTS continued to satisfy the Commission's standards for market-based rate authority, but indicated that its market-based rate authorization was subject to reexamination in the event that:

- (a) [GTS] seek[s] to add storage capacity beyond the capacity authorized in this proceeding;
- (b) an affiliate increases storage capacity;
- (c) an affiliate links storage facilities to [GTS];
- (d) [GTS], or an affiliate, acquire[s] an

³⁸ See 2007 Certificate Order at P 33; 2012 Certificate Order at P 19.

³⁹ See *Golden Triangle Storage, Inc.*, 152 FERC ¶ 61,158, at P 23 (2015).

interest in, or [is] acquired by, a pipeline connected to [GTS]; (e) an expansion of capacity; (f) the acquisition of additional transportation facilities; or (g) an affiliate providing transportation services in the same market area.⁴⁰

Because the Expansion Project will add storage capacity, GTS respectfully requests that the Commission reaffirm GTS' authorization to charge market-based rates following the completion of the Expansion Project.

GTS will increase the working gas capacity of the Existing Storage Facilities by approximately 14.4 Bcf. This increase will result in the Existing Storage Facilities having a total working gas capacity of 30.4 Bcf. The Expansion Project also will increase the maximum withdrawal rate of the Existing Storage Facilities by adding 860 MMcf/day of deliverability. While GTS' working gas capacity and deliverability will change as a result of the Expansion Project, the terms and conditions of the firm and interruptible storage, hub, and wheeling services offered by GTS after the Expansion Project is placed into service will be the same as the firm and interruptible storage, hub, and wheeling services that GTS currently offers. In addition, GTS is not establishing any new interconnection with any pipelines as part of this Expansion Project.

In support of this Application and request for reaffirmation of market-based rate authorization, GTS is including as an exhibit to this Application the prepared testimony and analysis of Mr. Toby Bishop, a Principal at The Brattle Group (the "Market Power Study"). The Market Power Study includes an updated market power analyses demonstrating that, with the anticipated changes in working gas capacity and deliverability,

⁴⁰ *Jefferson Island Storage & Hub, L.L.C. and Golden Triangle Storage, Inc.*, 163 FERC ¶ 61,049 at P 19 (2018).

GTS will be unable to exercise market power if granted the authority to continue to charge market-based rates for its firm and interruptible storage and wheeling services.⁴¹

As demonstrated in the Market Power Study, the increase in working gas capacity and increase in injection and withdrawal capacity resulting from the Expansion Project will not call into question the Commission's previous determination that GTS lacks market power over the provision of storage and related services in the relevant geographic area. After the Expansion Project is placed into service, GTS' market share of total working gas capacity will be 2.5% and its market share of maximum deliverability will be 3.4% in the relevant geographic market.⁴² The Market Power Study further demonstrates that the HHI levels for working gas capacity and maximum deliverability in the relevant geographic market will be 1019 and 1067, respectively.⁴³ Given these relatively low market shares and the low HHI values, Mr. Bishop concludes that GTS will continue to be unable to exercise market power as to firm or interruptible storage services, either acting alone or in combination with others, following completion of the Expansion Project. Mr. Bishop also identifies a number of other factors that further mitigate the potential for GTS to exercise market power, including the relative ease of entry into the relevant market, GTS' multiple connections to non-affiliated interstate natural gas pipelines, the availability of alternatives

⁴¹ See Exhibit I at p. 10. Hub services are all variations of the traditional firm and interruptible natural gas storage services, and thus they represent substitutes for firm and interruptible storage service. Given this, the market share and market concentration analyses presented in Exhibit I are relied on for demonstrating that GTS will continue to lack market power for hub services generally. This is consistent with Commission policy in the granting of market-based rate authority for hub services (see, e.g., *East Cheyenne Gas Storage, LLC*, 132 FERC ¶ 61,097 at P 38 (2010); *Liberty Gas Storage, LLC*, 113 FERC ¶ 61,247 at P 49 (2015)).

⁴² See Exhibit I at p. 8. Mr. Bishop calculated the market share of maximum deliverability in the relevant geographic market assuming that the Commission will grant GTS' pending request to increase the injection and withdrawal capability of Cavern 1 and Cavern 2; in the event the Commission did not grant GTS' request, GTS' market share of maximum deliverability would be even less.

⁴³ *Id.*

to storage in the relevant market, and the fact that a significant amount of the storage available in the relevant market is provided at market-based rates.

With respect to interruptible wheeling services, the Expansion Project will not modify the pipelines to which GTS interconnects, and the “bingo card” analysis remains completely filled-in and unchanged by construction and operation of the Expansion Project. In addition, the Market Power Study demonstrates that following completion of the Expansion Project, GTS would have a market share of only 1.4% for receipt capacity and a market share of only 1.5% for delivery capacity at the 25 hubs and market centers in the relevant geographic market.⁴⁴ In addition, the pipelines directly and indirectly interconnected to GTS are also interconnected with each other in numerous locations in the relevant geographic market, providing alternative interconnections on which shippers can rely. The HHI levels for receipt and delivery capacity at the hubs in the relevant geographic market are 1051 and 1056, respectively, indicating that the market is unconcentrated. In light of GTS’ small market shares and other limitations on GTS’ ability to work in conjunction with other participants in the market to exercise market power in providing wheeling services, Mr. Bishop concludes that GTS will continue to be unable to exercise market power as to wheeling services following completion of the Expansion Project.

Thus, consistent with the Commission’s prior analyses and authorization, and for the reasons set forth in the Market Power Study in Exhibit I, GTS respectfully requests that the Commission rely upon the analyses in the Market Power Study to reaffirm GTS’ authorization to charge market-based rates for firm and interruptible storage and wheeling services. GTS also requests that the Commission approve the continuation of waivers

⁴⁴ See Exhibit I at p. 9.

previously granted to GTS and typically granted to other market-based rate storage providers, including waiver of the following sections of the Commission's regulations: Section 157.6(b)(8) (submission of cost and revenue data); Section 157.20(c)(3) (postconstruction cost data); Sections 157.14(a)(13), (14), (16), and (17) (exhibits relevant to cost-based rates); Part 201 (accounting and reporting requirements) and Sections 260.1 and 260.2 (related to cost-of-service rate structure, Form 2, and Form 2-A, except for information necessary for assessment of annual charges); Section 260.300 (quarterly financial reporting); Sections 284.10, 284.7(d), and 284.7(e) (segmentation and straight fixed-variable rate design methodology); and Section 157.14(a)(11) (total gas supply data).⁴⁵

IX. LANDOWNER NOTIFICATION AND OUTREACH

In accordance with the requirements of Section 157.6(d) of the Commission's regulations,⁴⁶ GTS has identified, and will provide notice of the Expansion Project to, all affected landowners, as well as representatives for towns, communities, and local, state, and federal government and agencies involved in the Expansion Project within three business days of the Commission's issuance of a public notice of this Application. The names and mailing addresses of these landowners are listed in Appendix 1.C of Resource Report 1 in Exhibit F-I. This information has been designated as Privileged pursuant to Section 388.112 of the Commission's regulations, and it is labeled as "**CUI//PRIV**" and "**Contains Privileged Information – Do Not Release.**"

⁴⁵ 2012 Certificate Order at P 23; *BGS Kimball Gas Storage, LLC*, 117 FERC ¶ 61,112 at P 49 (2006).

⁴⁶ 18 C.F.R. § 157.6(d).

As required by Section 157.6(d), GTS will publish a notice of this Application twice in a local newspaper within two weeks after the date that a docket number is assigned to this Application. As required by Section 157.10(c), GTS will make a copy of this application available to the public at public libraries located in Jefferson County, Texas.

X. TARIFF

At this time, GTS is not proposing changes to its Tariff; however, GTS is in discussions with existing and potential customers regarding possible changes to its Tariff. In the event GTS determines that changes to its Tariff are necessary as a result of the Expansion Project, GTS will submit such Tariff changes as a supplemental filing to this Application.

XI.FORM OF NOTICE

In accordance with Section 157.6(b)(7) of the Commission's regulations, GTS has included a Form of Notice of this Application suitable for publication in the *Federal Register*.

XII. LIST OF EXHIBITS

This is an abbreviated Application filed pursuant to 18 C.F.R. § 157.7. As that regulation contemplates, GTS has omitted certain exhibits and information that are inapplicable or unnecessary to describe fully the nature and extent of the Expansion Project. GTS respectfully submits that an abbreviated application is justified and that the data and information contained in this Application are sufficient to provide a full and complete understanding of GTS's requests and their impacts.

Following is a list of the exhibits and documents filed with this Application, including exhibits that have been omitted and the reasons for those omissions:

Exhibit A Articles of Incorporation and By-Laws

Included.

Exhibit B State Authorization

Included.

Exhibit C Company Officials

Included.

Exhibit D Subsidiaries and Affiliation

This information is included in Section I of this Application.

Exhibit E Other Pending Applications and Filings

Omitted. As explained in Section IV of this Application, there are no other related applications.

Exhibit F Location of Facilities

Included in Exhibit F-I.

Exhibit F-I Environmental Report

Attached hereto in Volumes I through III.

- Volume I contains the public version of Exhibit F-I.
- Volume II contains the privileged and confidential information in Exhibit F-I and is labeled “CUI//PRIV” and/or “**Contains Privileged Information – Do Not Release.**”
- Volume III contains the critical energy infrastructure information in Exhibit F-I and is labeled “CUI//CEII” and/or “**Contains Critical Energy Infrastructure Information – Do Not Release.**”

- Exhibits G through G-II** Flow Diagrams and Flow Diagram Data
Included in Volume III and labeled “CUI//CEII” and “Contains Critical Energy Infrastructure Information – Do Not Release.”
- Exhibit H** Total Gas Supply Data
Omitted. Not applicable.
- Exhibit I** Market Data
Included.
- Exhibit J** Federal Authorizations
This information is contained in Table 1.10-1 of Resource Report 1 in the attached Exhibit F-1.
- Exhibit K** Cost of Facilities
Omitted. This information is not applicable in light of GTS’ request for reaffirmation of its authority to charge market-based rates.
- Exhibit L** Financing
Omitted. This information is not applicable in light of GTS’ request for reaffirmation of its authority to charge market-based rates.
- Exhibit M** Construction, Operation, and Management
Included.
- Exhibit N** Revenues, Expenses and Income
Omitted. This information is not applicable in light of GTS’ request for reaffirmation of its authority to charge market-based rates.
- Exhibit O** Depreciation and Depletion
Omitted. This information is not applicable in light of GTS’ request for reaffirmation of its authority to charge market-based rates.
- Exhibit P** Tariff
Omitted, as explained in Section X of this Application.
- Exhibit Z-1** Form of Protective Agreement
Included.

Exhibit Z-2 Open Season Notice

Included.

**XIII.
REQUEST FOR WAIVERS**

In addition to the specific waivers requested above, GTS respectfully requests that the Commission grant any additional waivers that it may deem necessary.

**XIV.
OTHER MATTERS**

Pursuant to Section 388.112 of the Commission's regulations,⁴⁷ GTS hereby requests privileged treatment of certain exhibits which are marked "CUI//PRIV" and "Contains Privileged Information – Do Not Release." This information is privileged and confidential because it contains cultural resource information, landowner information, and confidential, proprietary contractual information. It is included in Volume II of the Application.

In addition, GTS hereby requests, pursuant to Section 388.113 of the Commission's regulations,⁴⁸ confidential treatment of certain exhibits, which are marked "CUI//CEII" and "Contains Critical Energy Infrastructure Information – Do Not Release." This information is included in Volume III of the Application.

GTS is submitting a form of Protective Agreement as Exhibit Z-1. As provided in Section 388.112 of the Commission's regulations, GTS reserves the right to object to the disclosure of CEII or privileged information filed with the Commission.

⁴⁷ 18 C.F.R. § 388.112.

⁴⁸ 18 C.F.R. § 388.113.

In accordance with Section 157.6(c) of the Commission's regulations,⁴⁹ GTS requests that the Commission evaluate this Application in accordance with the shortened procedures set forth in Rules 801 and 802 of the Commission's Rules of Practice and Procedure.⁵⁰ If the Commission utilizes the shortened procedures, GTS requests that the intermediate decision procedure required by Rules 801 and 802 be omitted. If this Application is heard under the shortened procedures as set forth in Sections 157.6(c), 385.801, and 385.802 of the Commission's regulations, GTS hereby requests that the intermediate decision be omitted and waives oral hearing and the opportunity for filing exceptions to the decision of the Commission, but reserves its right to apply to the Commission for rehearing and to petition for judicial review of the Commission's decision.

Finally, **GTS respectfully requests that the Commission issue an order approving the amendment to the certificate and related authorizations by no later than May 1, 2024.** Consideration and approval of this Application within this timeframe will not prejudice the interests of the potentially affected public since, as shown above, the construction and operation of the Expansion Project are required by the public convenience and necessity. Moreover, a Commission order by May 1, 2024, will allow GTS to commence construction of Expansion Project and place the Expansion Project into service expeditiously. Given the market demand for gas storage demonstrated by the precedent agreements supporting the Expansion Project, the need for the Expansion Project is great, and the public interest will be served by permitting GTS to place the Expansion Project into service as soon as possible.

⁴⁹ 18 C.F.R. § 157.6(c).

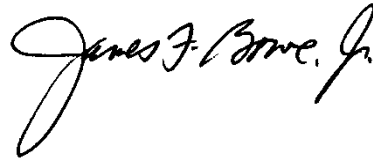
⁵⁰ 18 C.F.R. §§ 385.801, 385.802.

**XV.
CONCLUSION**

WHEREFORE, for the reasons set forth above, GTS respectfully requests that the Commission issue an order on or before May 1, 2024: (i) authorizing the activities requested in this Application, including construction and operation of the Expansion Project; (ii) reaffirming GTS' authorization to charge market-based rates for storage and wheeling services at the Existing Storage Facilities; and (iii) granting the related authorizations and waivers requested in this Application, as well as any other such waiver, authority and further relief as the Commission may deem necessary.

Respectfully submitted,

Golden Triangle Storage, LLC



By:

James F. Bowe, Jr.

James F. Bowe, Jr.
King & Spalding LLP
1700 Pennsylvania Avenue, NW
Suite 900
Washington, DC 20006
Tel: +1 202 626-9601
jbowe@kslaw.com

Tyler R. Brown
King & Spalding LLP
1180 Peachtree Street, NE
Suite 1600
Atlanta, GA 30309
Tel: 404 572-2809
trbrown@kslaw.com

Of Counsel

Dated: September 12, 2023

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Golden Triangle Storage, LLC) Docket No. CP23-__-000


I, the undersigned, declare under penalty of perjury that I am Counsel for Golden Triangle Storage, LLC; that I am authorized to execute this Verification; that I have read the foregoing Application and am familiar with the contents thereof; and that all allegations of fact contained in the Application are true and correct to the best of my knowledge and belief.

Executed on September 12, 2023.



Tyler R. Brown
Attorney for
Golden Triangle Storage, LLC

SWORN TO AND SUBSCRIBED before me on the 12th day of September 2023.


Notary Public for the state of Georgia

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Golden Triangle Storage, LLC

Docket No. CP23-____-000

NOTICE OF APPLICATION FOR CERTIFICATE OF
PUBLIC CONVENIENCE AND NECESSITY

(_____, 2023)

Take notice that on September 12, 2023, Golden Triangle Storage, LLC (GTS of Applicant), 919 Milam Street, Suite 2425, Houston, Texas 77002 filed with the Federal Energy Regulatory Commission an application under Section 7 of the Natural Gas Act for a certificate of public convenience and necessity allowing GTS to expand its existing natural gas storage facility in Jefferson County, Texas, through the construction and operation of two new salt dome storage caverns, additional compression, and other appurtenant facilities. Further, GTS requests reaffirmation of its market-based rate authority and related authorizations and waivers, all as more fully set forth in the request which is on file with the Commission and open to public inspection.

Any questions concerning this application may be directed to James F. Bowe, Jr., King & Spalding LLP, 1700 Pennsylvania Avenue, Suite 900, Washington, DC 20006, Phone (202) 626-9601, email jbowe@kslaw.com.

Any person desiring to intervene or to protest this filing must file in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a notice of intervention or motion to intervene, as appropriate. Such notices, motions, or protests must be filed on or before the comment date. Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant. On or before the comment date, it is not necessary to serve motions to intervene or protests on persons other than the Applicant.

The Commission encourages electronic submission of protests and interventions in lieu of paper using the "eFiling" link at <http://www.ferc.gov>. Persons unable to file electronically should submit an original and 5 copies of the protest or intervention to the Federal Energy Regulatory Commission, 888 First Street, NE, Washington, DC 20426.

This filing is accessible on-line at <http://www.ferc.gov>, using the "eLibrary" link and is available for review in the Commission's Public Reference Room in Washington, DC. There is an "eSubscription" link on the web site that enables subscribers to receive email notification when a document is added to a subscribed docket(s). For assistance with

any FERC Online service, please email FERCOnlineSupport@ferc.gov, or call (866) 208-3676 (toll free). For TTY, call (202) 502-8659.

Comment Date: 5:00 pm Eastern Time on (insert date).

Kimberly D. Bose,
Secretary.

Golden Triangle Storage, LLC

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Docket No. CP23-__-000

Exhibit A – Articles of Incorporation and Bylaws

Delaware

The First State

Page 1

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THAT THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF CONVERSION OF A DELAWARE CORPORATION UNDER THE NAME OF "GOLDEN TRIANGLE STORAGE, INC." TO A DELAWARE LIMITED LIABILITY COMPANY, CHANGING ITS NAME FROM "GOLDEN TRIANGLE STORAGE, INC." TO "GOLDEN TRIANGLE STORAGE, LLC", FILED IN THIS OFFICE ON THE EIGHTEENTH DAY OF NOVEMBER, A.D. 2022, AT 4:15 O`CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF CONVERSION IS THE TWENTY-SECOND DAY OF NOVEMBER, A.D. 2022.




Jeffrey W. Bullock, Secretary of State

4252212 8100V
SR# 20224059777

Authentication: 204896164
Date: 11-18-22

You may verify this certificate online at corp.delaware.gov/authver.shtml

State of Delaware
Secretary of State
Division of Corporations
Delivered 04:15 PM 11/18/2022
FILED 04:15 PM 11/18/2022
SR 20224059777 - File Number 4252212

**STATE OF DELAWARE
CERTIFICATE OF CONVERSION**

from a Corporation to a
Limited Liability Company pursuant to
Section 18-214 of the Limited Liability Company Act

1. The jurisdiction where the Corporation was first incorporated is Delaware.
2. The jurisdiction immediately prior to filing this Certificate is Delaware.
3. The date the Corporation first incorporated is December 1, 2006.
4. The name of the Corporation immediately prior to filing this Certificate is Golden Triangle Storage, Inc.
5. The name of the Limited Liability Company as set forth in its Certificate of Formation is Golden Triangle Storage, LLC.
6. The effective date of the conversion of the Corporation is November 22, 2022.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Conversion on this 18th day of November, 2022.

By: /s/ Evelyn Gallego
Name: Evelyn Gallego
Title: Authorized Person

**LIMITED LIABILITY COMPANY AGREEMENT OF
Golden Triangle Storage, LLC
A Delaware Limited Liability Company**

THIS LIMITED LIABILITY COMPANY AGREEMENT (this “Agreement”) of Golden Triangle Storage, LLC, a Delaware limited liability company (the “Company”), is adopted as of November 22, 2022 (the “Effective Date”), by Caliche Development Partners II, LLC, the Sole Member of the Company.

ARTICLE I.

DEFINITIONS

Section 1.1. Definitions. As used herein, the following terms shall have the following meanings (such meanings to be applicable to both the singular and plural form of the terms defined):

(a) “Act” means the Delaware Limited Liability Company Act, as amended from time to time (and any corresponding provisions of succeeding law).

(b) “Agreement” means this Limited Liability Company Agreement, as amended, modified, supplemented or restated and in effect from time to time.

(c) “Company” means Golden Triangle Storage, LLC, a limited liability company formed by the Initial Member pursuant to the Act and this Agreement.

(d) “Dissolution Event” is defined in Section 6.1.

(e) “Distributable Cash” means, as of any date, the portion of the Company’s cash on hand as of such date that the Sole Member determines from time to time to be available for distribution.

(f) “Effective Date” means the date first above written on which this Agreement was adopted.

(g) “Initial Member” means Caliche Development Partners II, LLC, a Delaware limited liability company.

(h) “Sole Member” means the sole member of the Company at any given time.

Section 1.2. Interpretation of Certain Terms. Words such as “herein”, “hereinafter”, “hereof”, “hereto” and “hereunder” refer to this Agreement as a whole, including any and all exhibits, schedules and annexes hereto, unless the context otherwise requires.

Section 1.3. Construction of the Term “Including”. The terms “include” and “including” shall be construed as if followed by the phrase “without limitation”.

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Section 1.4. Other Terms. All terms used in this Agreement which are not defined in this Article 1 shall have the meanings set forth elsewhere in this Agreement.

Section 1.5. Schedules, Exhibits and Annexes. All schedules, exhibits and annexes, if any, annexed or attached to this Agreement are expressly incorporated into and made a part of this Agreement.

Section 1.6. Terminology. All personal pronouns used in this Agreement, whether used in the masculine, feminine or neuter gender, shall include all other genders; the singular shall include the plural; and the plural shall include the singular. Titles of Articles, Sections, Subsections and Paragraphs in this Agreement are for convenience only, and neither limit nor amplify the provisions of this Agreement, and all references in this Agreement to Articles, Sections, Subsections or Paragraphs shall refer to the corresponding Article, Section, Subsection or Paragraph of this Agreement unless specific reference is made to the articles, sections, subsections or other subdivisions of another document or instrument.

ARTICLE II.

FORMATION

Section 2.1. Formation. The Company was formed on November 22, 2022, by filing a certificate of formation with the Delaware Secretary of State.

Section 2.2. Purpose. The purpose of the Company shall be to engage in any lawful business activities in which a limited liability company formed under the Act may engage or participate. The Company shall have any and all powers necessary to carry out the object and purpose of the Company to the extent the same shall be legally exercised by limited liability companies under the Act.

Section 2.3. Name. The name of the Company shall be Golden Triangle Storage, LLC.

Section 2.4. Registered Agent and Registered Office. The registered office of the Company shall be located at Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801. The initial registered agent for service of process at the registered office of the Company in Delaware shall be The Corporation Trust Company.

ARTICLE III.

MANAGEMENT AND RELATED MATTERS

Section 3.1. Authority of the Sole Member. All matters relating to the business or affairs of the Company shall be determined by the Sole Member (including, without limitation, the creation of any subsidiary of the Company).

Section 3.2. Records and Information. The Company shall maintain accurate books and records showing the Company's receipts and expenditures, assets and liabilities, and profits and losses, all in accordance with sound accepted accounting principles, consistently applied, and as

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required by the Sole Member from time to time. The Company shall produce such reports as the Sole Member shall request from time to time.

Section 3.3. Officers. Notwithstanding the foregoing, the Sole Member shall have the right to appoint one or more officers which shall have the powers and responsibilities delegated to them by the Sole Member.

Section 3.4. Indemnification. The Company shall indemnify the Company's officers, employees and agents to the same extent that the Company would have the power to indemnify each such person if the Company were a corporation incorporated under the laws of the State of Delaware and each such person were a director of such corporation.

ARTICLE IV.

FINANCIAL MATTERS

Section 4.1. Capital Contributions. From time to time after the Effective Date, the Sole Member shall contribute such cash and other assets to the capital of the Company as the Sole Member determines to be appropriate.

Section 4.2. Tax Matters. All matters relating to the taxation of the Company shall be treated as appropriate under applicable law for an entity that is a limited liability company having a single member. Notwithstanding the foregoing, the Company was formed with the intention that it would have only one member, such that at all times the Company would be disregarded as an entity separate from its owner for federal tax purposes under Section 301.7701-3(b)(1)(ii) of the Treasury Regulations. Accordingly, any action that would cause the Company to have more than one member shall be made in conjunction with the execution by the Company, and all of those persons who are to become members of the Company, of an amended and restated limited liability company agreement setting forth, at a minimum, the relative rights, obligations and duties of such members in respect of the Company, the manner in which the Company shall be operated, and the manner in which the Company shall be characterized for federal tax purposes (*i.e.*, as a partnership or an association taxable as a corporation).

Section 4.3. Distributions.

(a) Distributions. Subject to Section 4.3(b), Distributable Cash shall be distributed to the Sole Member at such times, and in such amounts, as the Sole Member shall determine from time to time.

(b) Restrictions on Distributions. No distribution shall be made by the Company that is prohibited by Section 18-607 of the Act.

ARTICLE V.

MEMBERS

Section 5.1. Indemnification. The Company shall indemnify the Sole Member and hold the Sole Member wholly harmless from and against any and all obligations and liabilities of the

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Company, if any, to which the Sole Member becomes subject by reason of being a member of the Company, whether arising in contract, tort or otherwise; provided, however, that the indemnification obligation of the Company under this Section shall be paid only from the assets of the Company, and no member of the Company shall have any personal obligation, or any obligation to make any contribution to the capital of the Company, with respect thereto.

Section 5.2. Membership Interests. The Company is hereby authorized (but not required) to issue a certificate representing the Membership Interest in accordance with the Act. “Membership Interest” shall mean the interest of the Sole Member in the Company, including, without limitation, rights to distributions (liquidating or otherwise), allocations, information, and the right to participate in the management of the business and affairs of the Company, including the right to vote on, consent to or otherwise participate in any decision or action of or by the Sole Member granted by this Agreement or the Act.

Section 5.3. Pledge. Notwithstanding anything in this Agreement to the contrary, the Sole Member shall have the right to pledge and grant a security interest in the Membership Interest as security for financing or other obligations of the Sole Member.

Section 5.4. Investment Securities. Pursuant to Delaware Uniform Commercial Code Sec. 8-103(c), the Membership Interest shall be considered a security governed by Article 8 of the Delaware Uniform Commercial Code.

ARTICLE VI.

DISSOLUTION

Section 6.1. Dissolution Event. The Company shall dissolve and commence winding up and liquidating upon, and only upon, the determination of the Sole Member that the Company shall be dissolved (“Dissolution Event”).

Section 6.2. Winding Up. Upon the occurrence of a Dissolution Event, the Company shall continue solely for the purposes of winding up its affairs in an orderly manner, liquidating its assets, and satisfying the claims of its creditors and members. Subject to the further provisions of this Section 6.2, the assets of the Company shall be liquidated to the extent determined to be appropriate by the Sole Member, and the proceeds thereof, together with such assets as the Sole Member determines to distribute in kind shall be applied and distributed in the following order:

- (1) First, to creditors, including the Sole Member to the extent it is a creditor, in satisfaction of liabilities of the Company (whether by payment or by making of reasonable provision for payment) other than liabilities for distributions to the Sole Member; and
- (2) The balance, if any, to the Sole Member.

Section 6.3. Certificate of Cancellation. Upon the dissolution and the completion of winding up of the Company, the Sole Member shall promptly execute and cause to be filed a certificate of cancellation in accordance with the Act and appropriate instruments under the laws

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of any other states or jurisdictions in which the Company has engaged in business. Upon such certificate of cancellation becoming effective, the Company shall be terminated.

ARTICLE VII.

MISCELLANEOUS

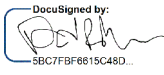
Section 7.1. Severability. Every provision of this Agreement is intended to be severable. If any term or provision hereof is illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity or legality of the remainder of this Agreement.

Section 7.2. Governing Law. The laws of the State of Delaware shall govern the validity of this Agreement and the construction of its terms.

[Signature Page Follows]

IN WITNESS WHEREOF, Caliche Development Partners II, LLC, as Sole Member,
executed and delivered this Agreement as of the Effective Date.

**CALICHE DEVELOPMENT PARTNERS II,
LLC**

By:  _____
Name: David R. Marchese
Title: Chief Executive Officer

Golden Triangle Storage, LLC

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Docket No. CP23-__-000

Exhibit B – State Authorization

Corporations Section
P.O.Box 13697
Austin, Texas 78711-3697



Office of the Secretary of State

CERTIFICATE OF AMENDED REGISTRATION OF

Golden Triangle Storage, LLC
800741918

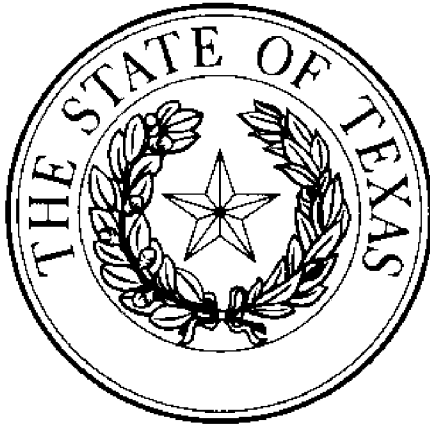
[formerly: Golden Triangle Storage, Inc.]

The undersigned, as Secretary of State of Texas, hereby certifies that an Amendment to Registration - Conversion or Merger to transact business in this state for the above named entity has been received in this office and has been found to conform to the applicable provisions of law.

ACCORDINGLY, the undersigned, as Secretary of State, and by virtue of the authority vested in the secretary by law, hereby issues this Certificate of Amended Registration to transact business in this state under the name of:

Golden Triangle Storage, LLC

Dated: 11/30/2022
Effective: 11/30/2022



A handwritten signature in black ink, appearing to read "John B. Scott".

John B. Scott
Secretary of State

Come visit us on the internet at <https://www.sos.texas.gov/>

Golden Triangle Storage, LLC

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Docket No. CP23-__-000

Exhibit C – Company Officials

Golden Triangle Storage, LLC

Officers

Dave Marchese

Chief Executive Officer

David Saindon

Chief Financial Officer

Michael Brown

Chief Commercial Officer

Darrell Hall

VP of Operations

Sam Wallace

VP of Commercial

Golden Triangle Storage, LLC

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Docket No. CP23-__-000

Exhibit G – Flow Diagrams

See Volume III

Golden Triangle Storage, LLC

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Docket No. CP23-__-000

Exhibit G-II – Flow Diagram Data

See Volume III

Golden Triangle Storage, LLC

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Docket No. CP23-__-000

Exhibit I – Market Data

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**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Golden Triangle Storage, LLC) Docket No. CP23-___-000

**PREPARED TESTIMONY OF
TOBY BISHOP**

Q. Please state your name, employer, business address and current employment position.

A. My name is Toby Bishop, and I am a Principal at The Brattle Group (“Brattle”). My business address is One Beacon Street, Suite 2600, Boston, MA 02108.

Q. Please describe your professional background and experience.

A. I have over 25 years of experience consulting in the North American energy industry. My natural gas pipeline experience includes numerous engagements assisting clients in the United States and Canada with a wide range of issues, including policy and strategic issues, rate and financial matters, market power analyses, asset valuation, litigation/arbitration support and damages, market assessments, and project development. My experience has included a number of rate proceedings in both the US and Canada on behalf of individual shippers, large shipper groups, and pipelines. I have also assisted various clients throughout the United States and Canada with market-related matters and have prepared numerous assessments of market dynamics that have been filed with the Federal Energy Regulatory Commission (“Commission” or “FERC”), used publicly for development initiatives, and used internally by clients for investment decisions.

1 **Q. What is your experience in assisting clients in the evaluation of issues related to**
2 **market power, and specifically natural gas storage and pipeline-related market**
3 **power issues?**

4 A. I have assisted natural gas storage owners and developers on over 25 separate occasions,
5 as well as pipelines and electric and gas utilities, in both the United States and Canada,
6 with market power-related issues, including corporate mergers and market-based rate
7 evaluations.

8 **Q. Have you previously submitted testimony before the Commission or other regulatory**
9 **agencies?**

10 A. Yes. I have provided expert testimony on a number of occasions before federal, state and
11 provincial regulatory agencies in the United States and Canada, including before the
12 Commission. Regarding market power issues specifically, I have submitted testimony on
13 behalf of numerous storage clients concerning requests for market-based storage and
14 wheeling rates in both the United States and Canada. In addition, I have previously
15 submitted testimony on various policy, rate, and tariff-related matters concerning natural
16 gas companies in the United States and Canada. My qualifications are included in
17 Appendix A.

18

19 **I. Introduction**

20 **Q. On whose behalf are you providing this testimony?**

21 A. I am providing this testimony on behalf of Golden Triangle Storage, LLC (“Golden
22 Triangle”).

23

1 **Q. What is the purpose of your testimony?**

2 A. I have been asked by Golden Triangle to conduct a market power analysis consistent with
3 the Commission's requirements for market-based rate applications for firm and
4 interruptible storage and wheeling service.

5 On November 18, 2022, Caliche Development Partners II, LLC ("Caliche")
6 acquired ownership of Golden Triangle, which is currently authorized by the Commission
7 to provide firm and interruptible storage services and interruptible wheeling service, from
8 Southern Company Gas.¹ In the current proceeding, Golden Triangle is proposing to
9 expand its existing natural gas storage operations through the construction and operation
10 of two new salt dome storage caverns. This expansion will increase the working gas
11 capacity and deliverability provided by Golden Triangle; accordingly, Golden Triangle is
12 requesting that the Commission reaffirm its existing market-based rate authorization for
13 storage and wheeling services. The purpose of my testimony is to evaluate whether Golden
14 Triangle, and its ultimate owners, will likely be able to exercise market power in the
15 provision of firm and interruptible storage services, and interruptible wheeling service, if
16 Golden Triangle is authorized to expand its existing storage and wheeling capabilities.

¹ *Golden Triangle Storage, Inc.*, 121 FERC ¶ 61,313 (2007) ("2007 Order") (approved market-based rates for firm and interruptible storage services and interruptible wheeling service); *Golden Triangle Storage, Inc.*, 138 FERC ¶ 61,036 (2012) ("2012 Order") (approved expansion and affirmed market-based rates for firm and interruptible storage services and interruptible wheeling service); *Golden Triangle Storage, Inc.*, 152 FERC ¶ 61,158 (2015) ("2015 Order") (approved market-based rate authority for firm wheeling service).

1 **Q. Has Golden Triangle previously received authorization to expand its storage facility**
2 **and provide firm and interruptible storage service and firm and interruptible**
3 **wheeling service pursuant to market-based rates?**

4 A. Yes. In the 2012 Order, the Commission issued a certificate authorizing Golden Triangle
5 to expand its existing storage facility by constructing and operating two additional storage
6 caverns (*i.e.*, Cavern 3 and Cavern 4). The Commission authorized Golden Triangle to
7 provide its existing and proposed firm and interruptible storage and interruptible wheeling
8 services at market-based rates. Subsequently, in the 2015 Order, the Commission
9 authorized Golden Triangle to provide firm wheeling service. The expansion of Golden
10 Triangle's storage facility contemplated and authorized in the 2012 Order was never
11 constructed and, as a result, the certificate authority for the expansion, and authorization to
12 provide market-based rates from the expansion, lapsed.

13 **Q. Please provide a description of the Golden Triangle storage facility.**

14 A. Golden Triangle owns and operates an underground salt cavern natural gas storage facility
15 located in Orange and Jefferson Counties, Texas that consists of two caverns (*i.e.*, Cavern
16 1 and Cavern 2). Golden Triangle is currently authorized by the Commission, in the
17 aggregate for Caverns 1 and 2, to provide 16.0 Bcf of working gas capacity, a maximum
18 injection capability of 300 MMcf/d, and a maximum withdrawal capability of 600
19 MMcf/d.² The facility currently has bi-directional interconnects with three interstate

² On July 14, 2023, Golden Triangle filed an application with the Commission to amend its certificate for Caverns 1 and 2 to provide that Golden Triangle may: (1) withdraw natural gas from storage at a rate of as much as 680 million cubic feet ("MMcf") per day ("MMcf/day") instead of the 600 MMcf/day maximum withdrawal rate; and (2) inject natural gas into storage at a rate of as much as 765 MMcf/day, instead of the 300 MMcf/day maximum injection rate. *See* Golden Triangle Storage, LLC, Abbreviated Application for Amendment of Certificate of Public Convenience and Necessity to Increase Storage Facility Withdrawal and Injection Rates and for Reaffirmation of Authorization to Charge Market-Based Rates, Docket No. CP23-511-000 (July 14, 2023) ("July Application"). The July Application is currently pending before the Commission.

1 pipelines (*i.e.*, Texas Eastern Transmission Company (“TETCO”); Florida Gas
2 Transmission (“FGT”); and Golden Pass Pipeline (“Golden Pass”)) and three intrastate
3 pipelines (*i.e.*, Houston Pipe Line Company (“HPL”); Kinder Morgan Texas Pipeline
4 (“KM Texas”); and Centana Intrastate Pipeline (“Centana”)), as well as an interstate
5 delivery interconnect with the Natgasoline methanol production plant (“Natgasoline”) in
6 Beaumont, Texas.

7 Golden Triangle is proposing to construct, own, and operate two additional storage
8 caverns (*i.e.*, Cavern 3 and Cavern 4) that would provide an incremental 14.4 Bcf of
9 working gas capacity and 860 MMcf/d of deliverability. Thus, assuming both Commission
10 approval of the July Application for Caverns 1 and 2 and the expansion for Caverns 3 and
11 4, the total working gas capacity would be 30.4 Bcf and a total deliverability of 1,540
12 MMcf/d for all four caverns.

13 **Q. Please describe the ownership of Caliche.**

14 A. Caliche is owned by Orion Infrastructure Capital (99%) and Caliche Management II, LLC
15 (1%), both of which are privately-held investment firms.

16 **Q. In addition to Golden Triangle, does Caliche or any of its subsidiaries or affiliates**
17 **own, lease and/or operate any other natural gas storage or transmission facilities in**
18 **the Gulf Coast?**

19 A. No. Beyond the Golden Triangle facilities, neither Caliche nor any of its subsidiaries or
20 affiliates own or operate any other natural gas storage facilities in the United States.³

³ Caliche is in the process of buying Central Valley Gas Storage, LLC, which owns and operates a natural gas storage facility located in California, but the acquisition has not closed at this time and nor is the facility located within the same geographic market.

1 **Q. Is the analysis that you have prepared consistent with the Commission’s traditional**
2 **market power framework for natural gas storage facilities?**

3 A. Yes. The analysis that I have performed was done in accordance with the traditional market
4 power framework used to evaluate market-based rate applications of natural gas companies
5 as set forth in the Commission’s 1996 policy statement titled *Alternatives to Traditional*
6 *Cost of Service Ratemaking for Natural Gas Pipelines and Regulation of Negotiated*
7 *Transportation Services of Natural Gas Pipelines* (“Policy Statement”),⁴ as well as
8 accounts for various subsequent Commission orders regarding market-based firm and
9 interruptible storage and wheeling rates, including the Commission’s Order Nos. 678 and
10 678-A.⁵

11 In its Policy Statement, the Commission stated that, “where a natural gas company
12 can establish that it lacks significant market power, market-based rates are a viable option
13 for achieving the flexibility and added efficiency required by the current market-place.”⁶
14 Under Commission precedent, an applicant for market-based rates must demonstrate that
15 neither the applicant nor any of its affiliates will be able to exercise market power in any
16 relevant market. A lack of market power can be demonstrated by either showing that the
17 applicant has a market share in each relevant market that is below the safe harbor levels
18 typically considered by the Commission as an indication of lack of market power, or
19 through the identification of market power mitigation measures that alleviate any market
20 power concerns. The Policy Statement sets forth three steps that must be evaluated by

⁴ *Alternatives to Traditional Cost of Service Ratemaking for Natural Gas Pipelines and Regulation of Negotiated Transportation Services of Natural Gas Pipelines*, 74 FERC ¶ 61,076 (1996).

⁵ *Rate Regulation of Certain Natural Gas Storage Facilities* (“Order No. 678”), FERC Stats. & Regs. ¶ 31,220 (2006), *order on clarification and reh’g* (“Order No. 678-A”), 117 FERC ¶ 61,190 (2006).

⁶ *Policy Statement* at 61,227.

1 applicants for market-based rates: (1) defining the relevant geographic and product
2 markets; (2) measuring a firm's market share and market concentration in the relevant
3 market; and (3) evaluating other factors relevant to the applicant's ability to exercise
4 market power.

5 The Commission has traditionally evaluated two ways in which an applicant could
6 exercise market power – alone or acting in conjunction with other sellers in the market.
7 Thus, the Commission has evaluated both an applicant's market share in the relevant
8 market and the overall concentration of the market to determine whether market-based rate
9 authority is appropriate. Market share provides an indication of an applicant's ability
10 individually to exercise market power, while market concentration provides an indication
11 of the ability of an applicant to work in conjunction with other sellers in the market to
12 exercise market power.

13 **Q. Please summarize the appendices to your testimony.**

14 **A.** I am sponsoring the following appendices:

- 15 • Appendix A: Qualifications
- 16 • Appendix B: Map of storage facilities in relevant geographic market
- 17 • Appendix C: Calculation of Golden Triangle's market share and the overall
18 concentration in the relevant geographic market for working gas capacity
- 19 • Appendix D: Calculation of Golden Triangle's market share and the overall
20 concentration in the relevant geographic market for maximum daily
21 deliverability
- 22 • Appendix E: "Bingo Card" analysis
- 23 • Appendix F: Market share and market concentration of the receipt and delivery
24 point capacity of hub, market centers and pipeline interconnects in the relevant
25 geographic market
- 26

1 **II. Summary**

2 **Q. Could you please summarize the principal conclusions from your analysis?**

3 A. Based on my assessment of the potential for Golden Triangle to exercise market power if
4 granted authority by the Commission to continue to provide firm and interruptible storage
5 and wheeling services at market-based rates after its proposed expansion,⁷ my conclusions
6 are as follows:

7 Firm/Interruptible Storage Services

- 8 • It is highly unlikely that Golden Triangle would be able to exercise market power
9 if granted the ability to continue to charge market-based rates for firm and
10 interruptible storage services. Specifically:
- 11 ○ As shown in Appendix C, Golden Triangle's market share of total
12 working gas capacity is just 2.5%.
- 13 ○ Similarly, as shown in Appendix D, Golden Triangle's market share of
14 maximum daily deliverability is just 3.4%.
- 15 • After the proposed expansion, Golden Triangle's market share for both
16 working gas capacity and deliverability will continue to be well below
17 traditional thresholds indicative of a lack of market power, which is consistent
18 with the Commission's previous findings of a lack of market power (i) in the
19 2012 Order regarding Golden Triangle's prior proposed expansion; and (ii) for
20 various other storage providers in this same geographic market.
- 21 • The storage market in the relevant geographic area is considered
22 unconcentrated based on an HHI (defined below) analysis for both working gas
23 capacity and peak day deliverability.
- 24 ○ Specifically, the HHI levels for working gas capacity and maximum
25 daily deliverability are 1019 and 1067, respectively. These market
26 concentration levels are indicative that Golden Triangle will remain
27 unable to act in concert with others to exercise market power after its
28 proposed expansion.

⁷ With the exception of wheeling service that I discuss here, hub services are all variations of the traditional firm and interruptible natural gas storage services, and thus they represent substitutes for firm and interruptible storage service. Given this, the market share and market concentration analyses presented herein are relied on for demonstrating that Golden Triangle will continue to lack market power for hub services generally. This is consistent with Commission policy in the granting of market-based rate authority for hub services (*see, e.g., East Cheyenne Gas Storage, LLC*, 132 FERC ¶ 61,097 at P 38 (2010); *Liberty Gas Storage, LLC*, 113 FERC ¶ 61,247 at P 49 (2015)).

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- While Golden Triangle’s market share figures are indicative of a lack of market power, there are numerous additional factors present that further mitigate the potential for an exercise of market power, including:
 - Various storage providers have previously entered the market and/or announced new storage projects, indicating a relative ease of entry into the market when market conditions warrant.
 - Golden Triangle is dependent upon non-affiliated interstate and intrastate pipelines to transport its customers’ natural gas from the storage facility to the customers’ markets, and many of these same pipelines own and operate their own storage facilities.
 - There are numerous alternatives to storage available to customers (*e.g.*, an active capacity release market on the interstate pipelines, pipeline park and loan services, and seasonal/swing services provided by marketers). In addition, my analysis of alternatives does not include local production available within or outside of the Gulf Coast Production Area that is accessible to the region via the longer haul pipelines that traverse the region. As the Commission has acknowledged, local production can compete with storage services as a means of meeting the demand that storage withdrawals can address. While local production available in the Gulf Coast Production area could also compete with the storage services provided by Golden Triangle, I have not taken this additional alternative into account. For this reason, my analysis can be considered conservative.
 - Even after its proposed expansion, Golden Triangle will remain a small participant in the relevant market and will continue to be comparable to other storage providers in the same geographic market and elsewhere throughout the U.S. that previously have been granted market-based rate authority by the Commission.
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29 Firm/Interruptible Wheeling Services

- The pipelines that are directly interconnected (or can easily be directly interconnected) and indirectly interconnected to Golden Triangle are also interconnected with each other in numerous other locations in the relevant geographic market. This indicates that shippers can avoid the pipeline interconnections provided by Golden Triangle and rely entirely on other pipeline interconnections currently available in the market to wheel natural gas if Golden Triangle were to attempt to raise prices and exercise market power in the provision of wheeling services.
 - Golden Triangle has a market share of just 1.4% and 1.5% of receipt and delivery capacity, respectively, at the 25 hubs and market centers in the relevant geographic market.
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- 1 ○ There are at least 160 receipt interconnections and 158 delivery
2 interconnections at the hubs and market centers in the relevant
3 geographic market.
- 4 ○ Total receipt and delivery capacity at these hubs and market centers
5 totals approximately 86 Bcf/d and 92 Bcf/d, respectively.
- 6 ○ The market for both receipt and delivery point capacity is considered
7 unconcentrated.
- 8 ○ The small market shares of Golden Triangle for receipt and delivery
9 capacity, as well as the unconcentrated nature of the market, indicates
10 that there are numerous good alternatives to the wheeling services
11 offered by Golden Triangle and that Golden Triangle will not be able to
12 act alone or in conjunction with other competing hubs in the Gulf Coast
13 Production Area.

14 For all of these reasons, it is my conclusion that Golden Triangle will continue to be
15 unable to exercise market power if granted the authority to continue to charge market-based
16 rates for its firm and interruptible storage services and its firm and interruptible wheeling
17 services.

18

19 **III. Market Power Analysis**

20 **Q. How have you defined the relevant product market for purposes of the analysis?**

21 A. I have defined the relevant product market as firm and interruptible storage service, and
22 separately, as firm and interruptible wheeling (or transportation) service. The firm and
23 interruptible wheeling services that Golden Triangle is currently authorized to offer are
24 transportation services, and the Commission has historically recognized wheeling services as
25 a separate product distinct from firm and interruptible storage services. Defining the relevant
26 product market in this manner is consistent with the definition the Commission has previously
27 used in evaluating Golden Triangle's prior requests for market-based rates,⁸ as well as for

⁸ See 2007 Order; 2012 Order; 2015 Order.

1 numerous natural gas storage projects that have received market-based rate authority in the
2 United States.⁹ The firm and interruptible storage service and firm and interruptible wheeling
3 service that can be offered by Golden Triangle after its proposed expansion are the same as
4 the firm and interruptible storage and interruptible wheeling service that it currently offers.
5 These services are standard storage and transportation services that are provided by numerous
6 interstate and intrastate natural gas storage providers and pipelines throughout the United
7 States.

8 Specifically with regard to Golden Triangle's firm and interruptible storage services,
9 I have evaluated the potential for Golden Triangle to exercise market power considering a
10 product market consisting of other storage facilities. While the Commission has recognized
11 that local production can also be a competitive alternative,¹⁰ and reflecting local production
12 as a competitive alternative to natural gas storage is consistent with the approach previously
13 approved by the Commission in various prior requests by applicants for market-based rates
14 for firm and interruptible storage services,¹¹ my analysis is conservative in that I have
15 excluded local production from the analyses. Appendices C and D present the market share
16 and market concentration analysis related to Golden Triangle's firm and interruptible storage
17 services.

⁹ See, e.g., *Arlington Storage Company, LLC*, 163 FERC ¶ 61,077 (2018).

¹⁰ Order No. 678, at P. 25.

¹¹ See, e.g., *LA Storage, LLC*, 180 FERC ¶ 61,188 (2022); *Spire Storage West, LLC*, 179 FERC ¶ 61,123 (2022); *Washington 10 Storage Corporation and South Romeo Gas Storage Company, L.L.C.*, 175 FERC ¶ 61,051 (2021); *Spire Storage West, LLC and Clear Creek Storage Company L.L.C.*, 166 FERC ¶ 62,038 (2019).

- 1 **Q. How have you defined the relevant geographic market for purposes of the analysis?**
- 2 A. I have defined the relevant geographic market as the Gulf Coast Production Area, which
- 3 includes eastern Texas, Louisiana, Mississippi, and Alabama. This is the same geographic
- 4 market that has been utilized by numerous other storage applicants located in this same region
- 5 in prior requests for market-based rates approved by the Commission.¹²

6

7 **A. Storage Services Analysis**

- 8 **Q. What data did you rely upon for purposes of evaluating Golden Triangle's market**
- 9 **share and the market concentration for firm and interruptible storage services in the**
- 10 **relevant geographic market?**

- 11 A. For purposes of evaluating firm and interruptible storage services, I relied on the natural gas
- 12 storage information presented by the Energy Information Administration ("EIA") in its most
- 13 recent Natural Gas Annual Respondent Query System database. This database reflects
- 14 various statistics for active and inactive storage facilities in the U.S., including the name and
- 15 type of field, its owner, its base gas capacity, working gas capacity and maximum daily
- 16 delivery capability. I have reflected the total capability of each of the storage facilities in the
- 17 relevant geographic market.¹³ Since certain of the storage facilities in the relevant geographic
- 18 market are jointly owned, and the EIA database does not reflect these multiple ownership
- 19 positions, I have also supplemented this information as applicable with information from

¹² See, e.g., *LA Storage, LLC*, 180 FERC ¶ 61,188 (2022); *Jefferson Island Storage & Hub, L.L.C.*, 175 FERC ¶ 61,074 (2021); 2012 Order; *Tallulah Gas Storage, LLC*, 134 FERC ¶ 61,221 at P 32 (2011); *Cadeville Gas Storage LLC*, 132 FERC ¶ 61,115 at P 28 (2010); *Petal Gas Storage, L.L.C.*, 132 FERC ¶ 61,168 at P 26 (2010); *Perryville Gas Storage LLC*, 130 FERC ¶ 61,065 at P 30 (2010).

¹³ The full capability of each facility is used in the analysis, not just the capability that may be unsubscribed, as storage capacity and/or deliverability that can be released into the market through capacity release markets or assigned to others serves as direct competition to the storage services offered by Golden Triangle. This is consistent with Commission precedent. See, e.g., *ANR Storage Company*, 168 FERC ¶ 61,195 at P 22 (2019).

1 various parties' filings with the Commission, Commission orders, trade press research,
2 information on company websites and electronic bulletin boards, and other publicly-available
3 materials. Appendix B is a map of the relevant geographic market, which shows that there
4 are numerous existing storage facilities in the region.

5 **Q. How have you treated jointly-owned storage facilities in your analysis?**

6 A. There are multiple jointly-owned storage facilities in the relevant geographic market.
7 According to Commission precedent, "a voting interest of ten percent or more creates a
8 rebuttable presumption of control."¹⁴ For these jointly-owned storage facilities, while the
9 respective ownership interests are known, the terms of the ownership are not publicly
10 available and thus it is not known whether each of the owners have effective control over
11 the proportion of the capability of the storage field consistent with their ownership interest
12 or whether the operator of the facility has effective control. For purposes of this analysis,
13 I have assumed that each owner has control over their respective share of the storage
14 facility, meaning each owner controls the working gas capacity and deliverability
15 associated with their respective ownership percentage of the facility.

16 **Q. How would you characterize the approach to the market power analysis for storage
17 services that you have conducted?**

18 A. For a number of reasons, I would characterize the approach reflected in the market power
19 analysis for storage services as conservative because the analysis narrowly defines the
20 competitive alternatives to Golden Triangle's storage facility, and thus overstates its market
21 share and the market concentration. As noted previously, the Commission acknowledged in
22 Order No. 678 that the product market for storage services may be expanded to include

¹⁴ *ANR Storage Company*, 155 FERC ¶ 61,297 at P 32 (2016) (citing *WPS-ESI Gas Storage, LLC*, 108 FERC ¶ 61,061 at P 14 (2004)).

1 alternatives to storage, including pipeline capacity, local gas production, and LNG supplies,
2 since these services are close substitutes to storage service.¹⁵ However, no local production
3 is included in Appendices C and D, and the Commission has recognized that there are
4 hundreds of producers in the Gulf Coast Production Area.¹⁶ In addition, the analyses
5 presented in Appendices C and D do not consider storage substitutes other than natural gas
6 production, such as pipeline capacity held by customers with the potential to release such
7 capacity during peak winter periods (*i.e.*, marketers and producers).

8 Therefore, if local production and other storage alternatives were considered in the
9 relevant market, then Golden Triangle's market share and market concentration would be
10 even lower than the values reflected on Appendices C and D. Considering that all of the
11 adjustments made to the market power analysis for firm and interruptible storage services are
12 conservative, and overstate Golden Triangle's ability to exert market power, my analysis
13 comports with the Commission's previously stated policy that, if an applicant can demonstrate
14 a lack of market power in a narrowly-defined market, it is presumed that the applicant will be
15 unable to exert market power in a broader market.¹⁷

¹⁵ See Order No. 678 at P 6.

¹⁶ See, e.g., *LA Storage, LLC*, 180 FERC ¶ 61,188 at P 34 (2022).

¹⁷ See, e.g., *Worsham-Steed Gas Storage, L.P.*, 119 FERC ¶ 61,128 at P 10 n.8 (2007) (*citing* Order No. 678 at P 38); Order No. 678 at P 38 ("If an applicant has demonstrated a lack of market power under the traditional definition of product market, it follows that the applicant would qualify for market-based rates using an expanded definition of product market that includes additional substitutes."); *KN Interstate Gas Transmission Company*, 76 FERC ¶ 61,134 (1996) ("If the applicant cannot exercise market power in a narrowly-defined market then the Commission can reasonably assume that the applicant cannot exercise market power in a more widely-defined market.").

1 **Q. What are the results of the market power analysis for Golden Triangle's market**
2 **share of firm and interruptible storage services?**

3 A. The analysis demonstrates that Golden Triangle, after its proposed expansion, will be unable
4 to exercise market power in the relevant geographic market for firm and interruptible storage
5 services. As shown in Appendices C and D, there are 64 separate storage facilities or
6 ownership positions in storage facilities in the relevant geographic market that are unaffiliated
7 with and compete with Golden Triangle. Specifically, there is over 1,228 Bcf of storage
8 working gas capacity and over 45 Bcf/d of maximum daily deliverability in this region. In
9 addition, because Golden Triangle is located in the prolific Gulf Coast natural gas producing
10 region, the local production with which Golden Triangle also competes is substantial. As
11 shown on Appendices C and D, based on the conservative approach that I have taken to
12 evaluating Golden Triangle's ability to exert market power for storage services, I find that
13 Golden Triangle's market share is just 2.5% of the total working gas capacity and 3.4% of the
14 peak deliverability in the relevant market.

15 **Q. Has the Commission identified a specific market share percentage below which it**
16 **would be likely to find a lack of market power?**

17 A. No. The Commission has not identified in the Policy Statement or elsewhere a market share
18 percentage threshold below which it would find a lack of market power. However, the
19 resulting market shares in Appendices C and D are below, or very close to, Golden Triangle's
20 market shares when the Commission approved market-based firm and interruptible storage
21 rates in the 2012 Order.¹⁸ In addition, Golden Triangle's market shares are also consistent

¹⁸ 2012 Order at P 21 (approved market-based rates for Golden Triangle with market shares of 5.7% and 3.9% for working gas capacity and deliverability, respectively, in the Gulf Coast Production Area).

1 with those the Commission has previously found do not confer market power on storage
2 applicants in the same geographic market region,¹⁹ as well as throughout the United States.²⁰
3 These low market shares of working gas capacity and maximum deliverability strongly
4 suggest that Golden Triangle will continue to be unable to exercise market power even after
5 its proposed storage expansion.

6 In addition, while Golden Triangle's market share implies that it lacks market power
7 for storage services, its location within a large production area is a further impediment to
8 Golden Triangle's ability to exercise of market power. As the Commission has stated, "[i]n
9 general, market power in a production area is less of a concern due to the numerous alternative
10 storage facilities operating in competition with one another."²¹ The Gulf Coast Production
11 Area is one of the largest natural gas producing regions in the United States, and is
12 interconnected to other producing regions via interstate pipelines that are also directly and
13 indirectly interconnected to Golden Triangle.

14 For all of these reasons, it is my opinion that Golden Triangle will continue to be
15 unable to exercise market power for firm and interruptible natural gas storage services after
16 its proposed expansion.

¹⁹ See, e.g., *Enstor Katy Gas Storage and Transportation, L.P.*, 172 FERC ¶ 61,245 (2020) (approving market-based rates for market shares of 7.9% and 12.9% of working gas capacity and deliverability, respectively); *Petal Gas Storage, L.L.C.*, 97 FERC ¶ 61,097 (2001) (market shares of 15.8% and 17.6% of working gas capacity and deliverability, respectively).

²⁰ See, e.g., *ONEOK Gas Storage, L.L.C.*, 90 FERC ¶ 61,283 (2000) (market shares of 13.5% and 21.8% of working gas capacity and deliverability, respectively).

²¹ *Unocal Windy Hill Gas Storage, LLC*, 115 FERC ¶ 61,218 at P 10 (2006).

1 **Q. What are the results of the market power analysis regarding market concentration**
2 **for firm and interruptible storage services?**

3 A. In terms of measuring and evaluating market concentration, the Commission has accepted the
4 Department of Justice's/Federal Trade Commission's Merger Guidelines' use of the
5 Herfindahl-Hirschman Index ("HHI") as the appropriate methodology. The HHI is calculated
6 for each market participant by simply squaring each participant's market share, and then
7 summing the results to produce the overall HHI market concentration level. The Commission
8 has established that a market with an HHI above 1800 will require additional scrutiny since
9 the market would be considered concentrated and there exists in such a market the potential
10 for the exercise of market power. However, that an applicant operates in a market with an
11 HHI greater than 1800 does not preclude it from obtaining authorization to charge market-
12 based rates.

13 As shown on Appendices C and D, Golden Triangle's markets for both working gas
14 capacity and peak day deliverability would be considered unconcentrated given the HHI
15 levels of 1019 and 1067, respectively. This indicates that Golden Triangle will continue to
16 be unable to work in conjunction with other sellers in the market to exercise market power
17 for storage services.

18 **Q. Are there additional factors present in the relevant geographic market that mitigate**
19 **the potential for Golden Triangle to exercise market power for firm and interruptible**
20 **storage services?**

21 A. Yes. As noted earlier, the Commission concluded in the Policy Statement that market
22 shares and market concentration are not the only factors relevant to the assessment of the
23 ability to exercise market power. It has observed that an evaluation of other factors is also

1 important in the determination of whether a storage operator can exercise market power.
2 In addition to the market share and market concentration analyses that indicate Golden
3 Triangle will continue to be unable to exercise market power, there are numerous additional
4 factors that further support this conclusion.

5 First, as the Commission has previously found, it is relatively easy to enter the
6 relevant geographic market to offer gas storage services.²² While the economics for new
7 storage development have been challenging and new storage development has been limited
8 over the past decade due to the significant proliferation of natural gas production
9 throughout the United States, additional storage development has and is continuing to occur
10 in the same geographic market. For example, Atmos Energy placed into service its new
11 Bethel Salt Dome 1b facility in December 2022 that is approximately 6.6 Bcf of working
12 gas capacity and 750 MMcf/d of deliverability.²³ In addition, the LA Storage, LLC was
13 granted certificate authority to construct and operate a new natural gas storage facility in
14 Louisiana that will provide approximately 20 Bcf of working gas capacity and 1.5 Bcf/d of
15 deliverability.²⁴ Also, Tres Palacios recently filed with the Commission for certificate
16 authority to expand its existing storage facility in Texas by approximately 6.5 Bcf.²⁵

17 Second, Golden Triangle will continue to be dependent upon non-affiliated interstate
18 pipelines to transport natural gas from its storage facilities to end-users. Many of these same
19 pipelines, either directly or through affiliates, own and operate their own storage facilities in

²² *Transcontinental Gas Pipe Line Company LLC*, 181 FERC ¶ 61,079 at P 61 (2022) (“We agree with Transco that barriers to entry are likely to be low in the relevant market and that alternative products are available to shippers in the relevant geographic area.”)

²³ Texas Railroad Commission, Texas Gas Storage Operations, June 30, 2023.

²⁴ *LA Storage, LLC*, 180 FERC ¶ 61,188 (2022).

²⁵ Tres Palacios Gas Storage, LLC, Docket No. CP23-3-000, June 9, 2023.

1 the relevant geographic market as well (*e.g.*, Kinder Morgan Inc.; Tennessee Gas Pipeline;
2 Gulf South Pipeline) that can be marketed in competition with Golden Triangle's storage
3 services. Given this, Golden Triangle's small market share in a highly competitive storage
4 market, make it extremely difficult for Golden Triangle to exercise market power over the
5 provision of storage services.

6 Third, the market share and market concentration analyses presented herein do not
7 include other potential alternatives to storage that exist in the market (*e.g.*, pipeline capacity
8 available during peak demand periods, pipeline park and loan services, and seasonal/swing
9 services provided by marketers). Neither do the analyses reflect the local production both
10 within and outside of the Gulf Coast Production Area that is accessible to the region via the
11 longer haul pipelines that traverse the region and thus can also compete with the storage
12 services provided by Golden Triangle.

13 For all of the reasons noted above, it is highly unlikely that Golden Triangle will
14 be able to exercise market power if granted the authority to continue to charge market-
15 based rates for firm and interruptible storage services after its proposed expansion. Even
16 with the expansion, Golden Triangle will continue to be a very small participant in the
17 relevant geographic market, and will be comparable to or smaller than numerous other
18 storage providers in the same geographic market that have been granted market-based rate
19 authority by the Commission for firm and interruptible storage services.

1 **B. Wheeling Services Analysis**

2 **Q. What analyses did you conduct to evaluate the potential of Golden Triangle to exercise**
3 **market power for firm and interruptible wheeling service?**

4 A. To evaluate the continued validity of Golden Triangle’s existing authorization to provide
5 firm and interruptible wheeling service at market-based rates, I identified the numerous
6 pipeline interconnections in the relevant geographic market that could provide customers
7 with alternatives to the interruptible wheeling service that could be offered by Golden
8 Triangle. Specifically, I performed two analyses consistent with the Commission’s
9 traditional approach to evaluating wheeling services: (1) a “bingo card” analysis, which is
10 a matrix that identifies the various alternatives to Golden Triangle that market participants
11 have for wheeling natural gas between the pipelines directly and indirectly interconnected
12 to Golden Triangle; and (2) an analysis of Golden Triangle’s market share for wheeling
13 receipt and delivery capacity relative to alternative market hubs and pipeline interconnects
14 in the relevant geographic market. These analyses are the same analyses performed by
15 applicants seeking authorization to charge market-based rates for firm and for interruptible
16 wheeling services, and are the same analyses, as updated, that were previously conducted
17 as part of Golden Triangle’s application to provide firm and interruptible wheeling service
18 that was approved by the Commission in the 2015 Order.

19 **Q. Please explain the bingo card analysis that you conducted.**

20 A. The Commission has used a bingo card analysis to assess whether prospective customers
21 of an applicant seeking market-based rate authority for wheeling services can avoid the
22 pipeline interconnections provided by the applicant by utilizing alternative
23 interconnections available between the pipelines that are directly or indirectly connected

1 to the applicant's pipeline facilities. As mentioned previously, Golden Triangle is currently
2 directly interconnected with three interstate pipelines (*i.e.*, TETCO; FGT; and Golden
3 Pass), three intrastate pipelines (*i.e.*, HPL; KM Texas; and Centana), as well as an intrastate
4 delivery interconnection with the Natgasoline plant. The bingo card analysis reflects all of
5 Golden Triangle's existing interstate and intrastate pipeline interconnections. The bingo
6 card does not reflect Golden Triangle's existing delivery interconnection with the
7 Natgasoline plant; however, it has existing delivery interconnections with pipelines other
8 than Golden Triangle.²⁶

9 The bingo card analysis for Golden Triangle is provided as Appendix E, which
10 presents a summary of the alternate receipt and delivery interconnections available between
11 these interstate and intrastate pipelines other than the connection via Golden Triangle's
12 facilities.

13 **Q. Please explain the hubs analysis that you conducted.**

14 A. With pipeline interconnections and an ability to facilitate transactions across pipeline systems,
15 a storage provider's pipeline facilities can also be considered a market center or hub. The
16 Commission has traditionally evaluated whether an applicant controls a dominant share of
17 either the receipt or delivery capacity relative to other hubs, market centers and pipeline
18 interconnections in the relevant market for wheeling service. As the Commission is well
19 aware, there is a significant number of interconnected interstate and intrastate pipelines in the
20 Gulf Coast Production Area. Specifically, for purposes of this analysis, I have evaluated the
21 pipeline receipt and delivery interconnections associated with the various hubs in the relevant

²⁶ The Natgasoline plant is currently interconnected with TETCO, and also notes on its website that it is located near six interstate pipelines (*see*, <https://www.natgasoline.com/about/>). Therefore, there are many alternatives for natural gas to be supplied to the Natgasoline plant other than through Golden Triangle's wheeling services.

1 geographic market.²⁷ This approach is consistent with the Commission's established
2 approach to evaluating market share and market concentration for both firm and interruptible
3 wheeling services.²⁸ Also consistent with Commission precedent, the receipt capacity and
4 delivery capacity of each of the interconnections have been analyzed separately for this
5 analysis. The market share and market concentration analyses of the competing
6 hubs/interconnections are shown on Appendix F.

7 **Q. What information did you rely upon to conduct these wheeling analyses?**

8 A. The information to conduct the wheeling analyses presented in Appendices E and F was
9 obtained from the interstate pipelines' informational postings on their respective websites.
10 Specifically, the informational postings for each interstate pipeline identify the name and type
11 of interconnection (*i.e.*, receipt, delivery or bi-directional) and the design and operational
12 capacity for each interconnection.²⁹ Intrastate pipelines are not required to provide
13 interconnection information via an electronic bulletin board or company website as are
14 interstate pipelines, and thus such information is not publicly available for the intrastate
15 pipelines connected to Golden Triangle. Information regarding the capabilities of the
16 intrastate pipelines has been derived from the information provided by the interstate pipelines
17 with which these intrastate pipelines interconnect; however, information is not available for
18 pipeline interconnections between intrastate pipelines, and thus such information is not

²⁷ The hubs analysis includes both storage hubs (*i.e.*, pipeline header systems of storage facilities) and market centers/hubs where multiple pipelines interconnect with one another in a defined area in the Gulf Coast Production Area (*e.g.*, Perryville Hub; Carthage Hub). In addition, there are multiple other pipeline interconnections in the relevant geographic market that have not been considered.

²⁸ *See, e.g.*, *LA Storage, LLC*, 180 FERC ¶ 61,188 (2022); *Jefferson Island Storage & Hub, L.L.C.*, 175 FERC ¶ 61,074 (2021); 2015 Order; *Magnum Gas Storage, LLC*, 157 FERC ¶ 61,114 (2016); *UGI Storage Company*, 138 FERC ¶ 61,051 (2012).

²⁹ To the extent that the capacity of an interconnection point was listed differently by each interconnecting pipeline, the lower capacity value was utilized.

1 provided in the bingo card analysis.³⁰ The Commission has previously recognized the vast
2 number of pipeline interconnections that are available between interstate and intrastate
3 pipelines in the Gulf Coast Production Area and has authorized firm and interruptible
4 wheeling services at market-based rates without information regarding the pipeline
5 interconnections between intrastate pipelines being publicly available.³¹

6 **Q. What are the results of your bingo card analysis?**

7 A. As can be seen in Appendix E, the bingo card for Golden Triangle is completely filled-in,
8 meaning that the pipelines directly interconnected to Golden Triangle are also directly or
9 indirectly interconnected with each other in various other locations in the Gulf Coast. This is
10 consistent with the Commission's prior finding regarding Golden Triangle's firm wheeling
11 service in the 2015 Order. The bingo card indicates that shippers can avoid the pipeline
12 interconnections provided by Golden Triangle and rely entirely on other pipeline
13 interconnections currently available in the market to wheel natural gas if Golden Triangle
14 were to attempt to exercise market power and raise prices in its provision of wheeling services.

15 Specifically, as shown on Appendix E, there are 76 alternative paths between the
16 pipelines that are capable of providing competing firm and interruptible transportation
17 services to Golden Triangle. These alternative interconnections are capable of transporting
18 over 12 Bcf/d of natural gas. Shippers on these pipelines can also facilitate exchanges with
19 one another instead of utilizing Golden Triangle's facilities. In addition, there are also
20 numerous additional alternative indirect interconnections beyond the direct interconnection

³⁰ Such information had been previously been aggregated and provided through a subscription data service provider; however, such information is no longer available from the provider..

³¹ See, e.g., *Enstor Katy Gas Storage and Transportation, L.P.*, 172 FERC ¶ 61,245 (2020), and also, the application of the applicant in Docket No. PR20-56 as supplemented on July 8, 2020, at p.29.

1 points between these pipelines that provide additional ways shippers may avoid Golden
2 Triangle's facilities altogether. This demonstrates that there are numerous alternatives to
3 Golden Triangle's firm and interruptible wheeling services.

4 **Q. What are the results of your analysis of receipt and delivery capacity and market**
5 **shares and market concentration at other hubs in the relevant geographic market?**

6 A. As shown on Appendix F, receipt capacity and delivery capacity of the hubs that are
7 alternatives to Golden Triangle are analyzed separately consistent with the Commission's
8 established precedent. As illustrated on Appendix F, Golden Triangle has a market share of
9 just 1.4% for receipt capacity and 1.5% for delivery capacity of the hubs in the highly
10 interconnected Gulf Coast Production Region. As shown on Appendix F, there are at least
11 160 receipt interconnections and 158 delivery interconnections at the hubs in the Gulf Coast
12 Production Region between the various pipelines that provide alternative routes for natural
13 gas to be wheeled in lieu of using Golden Triangle's pipeline facilities. This analysis indicates
14 that Golden Triangle's market shares for receipt and delivery capacity would continue to be
15 well below levels suggesting the likelihood that Golden Triangle could exercise market
16 power, and below the market shares in Golden Triangle's original application approved by
17 the Commission for market-based wheeling services. The results of this analysis show that
18 Golden Triangle's market shares are consistent with the market shares of other storage
19 facilities that have received Commission authorization to charge market-based rates for firm
20 and interruptible wheeling services.³² This indicates that Golden Triangle would continue to

³² See, e.g., *Perryville Gas Storage LLC*, 130 FERC ¶ 61,065 at P 36 (2010) (approving market-based rates for interruptible wheeling service with 13.8 percent market share for delivery capacity and 10.2 percent market share for receipt capacity); *Leaf River Energy Center, LLC*, 125 FERC ¶ 61,131 at P 44-45 (2008) (approving market-based rates for interruptible wheeling service with 22 percent market share for delivery capacity and 25 percent for receipt capacity).

1 be unable to exercise market power on a standalone-basis for firm and interruptible wheeling
2 service after its proposed expansion.

3 Furthermore, as shown in Appendix F, the analysis of market concentration for
4 receipt and delivery capacity at the hubs in the relevant geographic market results in HHI
5 levels of 1051 and 1056, respectively, indicating that the market is unconcentrated. In such
6 a market, Golden Triangle will be unable to act in concert with other hubs to exercise
7 market power.

8 All of these facts indicate that Golden Triangle will continue to be unable to exert
9 market power if the Commission is to reaffirm its market-based rate authority for firm and
10 interruptible wheeling services.

11 **Q. In your view, are there additional factors present that mitigate the potential for
12 Golden Triangle to exercise market power for its interruptible wheeling service?**

13 **A.** Yes. For a number of reasons, the analysis presented regarding wheeling services is
14 conservative.

15 First, this analysis is conservative given that information is not publicly available
16 for the receipt and delivery interconnections associated with the intrastate pipelines that
17 also interconnect with one another at the hubs/market centers in the Gulf Coast. In
18 addition, there are also pipelines in the relevant geographic market that contract for capacity
19 on one another, and thus the level of interconnectedness between these pipelines is greater
20 than reflected in Appendix F. For example, Permian Highway Pipeline, a large intrastate
21 pipeline in Texas, leases capacity on the Kinder Morgan Tejas pipeline, which is another
22 large intrastate pipeline in Texas. Thus, the market share and market concentration of
23 receipt and delivery point capacity to provide wheeling services reflected on Appendix F

1 is conservative in that the capacity of these additional connections has not been reflected
2 in the market shares and market concentration.

3 Second, an important aspect of the competitiveness of this market that is not
4 reflected on Appendix F is that there are numerous local distribution companies, producers
5 and marketers in the region that hold firm capacity on these pipelines. These parties
6 also contract for firm storage service from these pipelines. With such capacity, these
7 shippers are able to effectuate transactions for third parties between the pipelines without
8 relying on Golden Triangle's pipeline facilities. In other words, the services that local
9 distribution companies, producers, and marketers can offer in the relevant geographic
10 market by leveraging their assets across the various pipelines (*e.g.*, through exchanges
11 or bundled releases), can compete directly with the wheeling service that could be provided
12 by Golden Triangle.

13 Third, the market share and market concentration of receipt and delivery point
14 capacity to provide wheeling services reflected on Appendix F is conservative in that it
15 only reflects the capability of direct pipeline receipt and delivery interconnections in the
16 relevant market and does not include the ability of those pipelines to provide wheeling
17 service via displacement. If such capability had been included in the analysis, Golden
18 Triangle's market share would be even lower.

19 **Q. Does this conclude your testimony?**

20 A. Yes.

Appendix A

Toby Bishop

PRINCIPAL

Boston

978.793.3514

Toby.Bishop@brattle.com

Mr. Bishop is an energy industry expert with over 25 years of experience specializing in regulatory economics and civil litigation issues concerning the natural gas and electric industries.

Mr. Bishop has worked with various energy industry clients across the U.S. and Canada, including electric and natural gas utilities, natural gas pipelines and storage providers, and independent energy project developers.

Mr. Bishop's expertise covers strategic, regulatory, financial, and transactional matters for the energy industry. He has worked on federal and state rate case proceedings, valuations of numerous energy assets, utility municipalization efforts, contractual disputes, purchase and sales transactions, regulatory strategy and policy matters, and competitive and market power concerns.

Mr. Bishop has provided expert testimony, affidavits, and other filings in over 50 administrative and civil proceedings, including before the Federal Energy Regulatory Commission (FERC), the Canada Energy Regulator (CER), state and provincial regulatory agencies, and state courts. His testimony and reports have covered market power, utility ratemaking, prudence evaluations, market conditions, infrastructure need, valuation, and regulatory and economic policy.

Prior to joining Brattle, Mr. Bishop was a Senior Vice President at an energy consultancy, and he previously worked at two management consulting firms.

AREAS OF EXPERTISE

- Oil & Gas Litigation and Damages
- Energy Litigation & Regulatory Disputes
- Regulatory Economics, Finance & Rates

Appendix A

EDUCATION

- **Colgate University**
BA in Economics and Geography (magna cum laude; Phi Beta Kappa)

PROFESSIONAL EXPERIENCE

- **The Brattle Group (2022–Present)**
Principal
- **Concentric Energy Advisors, Inc. (2002–2022)**
Senior Vice President
- **Reed Consulting Group/Navigant Consulting, Inc. (1995–2002)**
- **Fleet National Bank (1993–1995)**

SELECTED CONSULTING EXPERIENCE

REGULATORY AND LITIGATION REPRESENTATION/SUPPORT

Extensive experience in the research, analysis, preparation, and defense of expert testimony, reports, affidavits, and other filings in administrative and civil proceedings on a wide range of energy and economic issues. Clients in these matters have included natural gas distribution companies, natural gas pipelines, natural gas storage providers, natural gas producers, electric utilities, and independent energy project developers. Testimony has focused on issues ranging from broad regulatory and economic policy, valuation for damages assessment, and management prudence to virtually all elements of the utility ratemaking process, including cost of service, cost allocation, rate design, and cost of capital. Representative engagements have included:

- Evaluation of potential market power and competitive concerns on over 25 occasions for leading North American energy companies, including the preparation of independent market power analyses and supporting testimony in association with market-based rate applications for underground natural gas storage facilities throughout the US and Canada and utility merger proceedings.
- Assisting clients across the U.S. with all aspects of cost of capital issues, including direct, rebuttal, surrebuttal testimonies, discovery, cross-examination and post-hearing briefs.

Appendix A

- Extensive litigation support to TransCanada PipeLines before the National Energy Board, including major proceedings regarding its Mainline pipeline restructuring, changes in services, abandonment cost recovery, and its comprehensive settlement to transition to a new tolling regime.
- Extensive litigation support to NOVA Gas Transmission Ltd. in multiple proceedings regarding the development and tolling of new facilities and new services in British Columbia and Alberta.
- Litigation support for multiple petroleum products pipelines concerning tolling disputes.
- Litigation support regarding electric, natural gas and water/wastewater cost of capital issues before various state regulatory commissions and the Federal Energy Regulatory Commission.
- Evaluation of the economic impacts and benefits associated with utility capital spending programs and the reasonableness of related rate requests.
- Litigation support for the Upper Midwest Shipper Group on all aspects of the rate case proceedings concerning Northern Natural (RP19-1353), Natural Gas Pipeline Company of America (RP17-303), and ANR Pipeline (RP16-440).
- Development of a financial model and assist in the transaction structuring for a natural gas storage developer seeking to construct and then sell a storage facility to an LDC in the western half of the US.
- Strategic analysis for a large energy company considering alternatives for its existing pipeline and storage portfolio.
- Litigation support for the WEC Energy Group on all aspects the Great Lakes Gas Transmission RP17-593 rate case proceeding.
- Litigation support, including the drafting of a reply expert report, relating to a \$500 million claim associated with the value of Ultra Petroleum Corp. exiting bankruptcy.
- Litigation support, including the drafting of expert reports, on behalf of Mitsubishi Heavy Industries regarding a \$7.5 billion claim in an international arbitration proceeding regarding damages associated with the SONGS 2 and 3 nuclear facilities.
- Cost allocation and rate design witness providing ongoing litigation support on behalf of Arizona Public Service in El Paso Natural Gas Company's two most recent FERC rate cases.

Appendix A

- Litigation support before the Alberta Energy Regulatory (formerly Energy Resources Conservation Board), on behalf of CrossAlta Gas Storage regarding public interest issues related to natural gas storage in a case in which an oil producer was seeking to drill through the CrossAlta storage reservoir.
- Preparing multiple rounds of testimony in support of a group of utilities, including Oncor, AEP and MidAmerican Energy, seeking to construct over \$5 billion of new transmission in Texas as part of the state's Competitive Renewable Energy Zone process.
- Preparing expert reports and providing litigation support to Boston Edison regarding its damages claims against the Department of Energy relating to spent nuclear fuel for Pilgrim nuclear generating station.
- Assisting ONEOK Partners in the development and implementation of two new off-system storage services for its Guardian Pipeline, including the development of the open season process for these new services, the pro forma tariff, forms of service agreement, precedent agreements between Guardian and its customers, and rate design for the new services.
- Preparation of an expert report on behalf of Merrill Lynch assessing and quantifying damages in its litigation regarding the sale of its energy trading business.
- Providing litigation support to Missouri Gas Energy to defend against proposed gas purchase disallowances for storage utilization, hedging activity and capacity release decisions.
- Providing ongoing regulatory oversight and litigation support to the Northern Distributor Group, a group of 13 local distribution companies (LDCs) in the Midwest served by Northern Natural Gas Company in FERC rate, certificate, and other regulatory matters. Included drafting testimony, comments, interventions and various other regulatory filings to be filed with the FERC.

VALUATION

Significant experience utilizing multiple methodologies to value energy assets for strategic planning, tax, financing and other purposes. Methodologies utilized have included discounted cash flow, comparable sales, replacement, and reproduction cost analyses. Have prepared expert reports, appraisals, review appraisals, testimony, and certifications for use before courts, federal and state regulatory proceedings, taxing authorities, financial institutions, and boards of directors. Representative engagements have included:

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- Valuation of numerous electric generation facilities (*e.g.*, coal, natural gas, run-of-river hydroelectric, pumped storage, biomass) throughout the United States.
- Valuation of the electric transmission and distribution property of numerous investor-owned and electric cooperative utilities.
- Preparation of feasibility studies evaluating the costs and benefits of the potential municipalization of existing electric utility systems in Colorado, Washington, Maine, and Kansas.
- Preparation of multiple whitepapers evaluating the issues concerning proposed legislation for state ownership of electric utility systems in Maine.
- Valuation of property of a telecommunications provider in New Hampshire for property tax purposes.
- Valuation of peak shaving and import LNG facilities.
- Valuation of a combined cycle electric generating facility in Florida for purposes of a fairness opinion issued by Concentric's subsidiary, CE Capital Advisors, Inc.
- Valuation of Northern Indiana Public Service Company's generation, transmission, and distribution assets as part of an electric rate proceeding.
- Valuation of certain FirstEnergy generation facilities for the release of a bond indenture.

MARKET ASSESSMENT

Retained by numerous leading domestic and international energy companies to provide assessments of energy markets throughout the United States. Such assessments have included evaluation of electric and natural gas supply issues, development of projected electric and natural gas demand, viability/feasibility of infrastructure projects including numerous analyses regarding underground storage, LNG and electric generation, analysis of gas commodity price trends, assessment of existing and projected natural gas and electric transmission infrastructure, market structure, regulatory issues, and assessment of competitive position. Market assessment engagements typically have been used as integral elements of asset-specific strategic plans, regulatory initiatives or valuation analyses. Many of the projects have been supported by the filing of expert reports with the FERC, the National Energy Board (NEB), and state regulatory agencies. Representative engagements have included:

Appendix A

- Preparation of a report on behalf of Spire Missouri regarding the benefits of the existing STL Pipeline versus other potential near-term and longer-term alternatives should the FERC decide to rescind the certificate for the STL Pipeline.
- Preparation of a report on behalf of the proposed Adelpia Gateway pipeline regarding the potential energy and economic benefits to natural gas and electric consumers in the Greater Philadelphia region.
- Preparation of multiple reports on behalf of the proposed PennEast Pipeline regarding the potential economic benefits of the pipeline to natural gas and electric customers in the Mid-Atlantic region, including rebuttal comments addressing issues raised by opponents of the pipeline.
- Preparing numerous assessments of the natural gas and electric markets in eastern Canada, Atlantic Canada, and the northeastern and mid-Atlantic United States for various energy companies seeking to enter the market and/or expand existing operations in the market.
- Preparing a detailed demand and supply analysis of the opportunity for underground natural gas storage in the Mid-Atlantic and upper Midwest markets.
- Evaluating the opportunity for the development of a new underground storage facility in the southeastern United States. The project included preparing a detailed report for the client that included the future market opportunity that could be achieved from the facility.
- Preparing a detailed demand/supply and risk analysis of an existing natural gas storage project in the eastern US for a commercial bank seeking to finance a partnership buyout of the facility.
- Evaluating the market opportunity for LNG in the northeastern United States for a client seeking to develop an LNG facility import terminal. The project included reviewing future demand/supply in the region and competing supplies.

MERGERS, ACQUISITIONS, AND DIVESTITURES

For numerous leading energy companies, have assisted in the acquisition and divestiture of over \$5 billion in energy assets, including providing strategic advice, detailed due diligence, and project management relating to a variety of regulated and non-regulated energy projects.

Representative engagements have included:

- The sales of the Point Beach, Palisades, and Duane Arnold nuclear generating facilities.

Appendix A

- The divestitures of the generating fleets of Boston Edison, GPU, and Potomac Electric Power.
- Assisting a large energy company evaluate and value a potential natural gas storage acquisition in the western United States.
- Assisting a large North American pipeline company evaluate its positioning in the market, including a review of issues such as cost of service, cost allocation, rate design, trading points and new service alternatives for its pipelines.
- Confidential buy-side valuation and assessment of a regulated combination electric and natural gas utility in the northeastern US.
- Confidential buy-side valuation and assessment of a regulated combination electric and natural gas utility in New York.

EXPERT TESTIMONY

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Federal Energy Regulatory Commission				
Northern Distributor Group	10/98	Northern Natural Gas Company	Docket No. RP98-203	Cost Allocation
Central New York Oil & Gas Company, LLC	2/06	Central New York Oil & Gas Company, LLC	Docket No. CP06-64-000	Market Power
Central New York Oil & Gas Company, LLC	10/07	Central New York Oil & Gas Company, LLC	Docket No. CP06-64-001	Market Power
Chestnut Ridge Storage, LLC	12/07	Chestnut Ridge Storage, LLC	Docket No. CP08-36	Market Power
Arlington Storage Company, LLC	3/08	Arlington Storage Company LLC	Docket No. CP08-96	Market Power
Worsham-Steed Gas Storage, LP	5/08	Worsham-Steed Gas Storage, LP	Docket No. PR08-23	Market Power
Arizona Public Service Company	5/09	El Paso Natural Gas Company	Docket No. RP08-426	Cost Allocation/ Rate Design
Arizona Public Service Company	7/09	El Paso Natural Gas Company	Docket No. RP08-426	Cost Allocation/ Rate Design

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Arizona Public Service Company	8/09	El Paso Natural Gas Company	Docket No. RP08-426	Cost Allocation/ Rate Design
UGI Storage Company	11/09	UGI Storage Company	Docket No. CP10-23	Market Power
Magnum Gas Storage, LLC	11/09	Magnum Gas Storage, LLC	Docket No. CP10-22	Market Power
East Cheyenne Gas Storage, LLC	1/10	East Cheyenne Gas Storage, LLC	Docket No. CP10-34	Market Power
Petal Gas Storage, LLC	1/10	Petal Gas Storage, LLC	Docket No. CP10-50	Market Power
UGI Storage Company	2/10	UGI Storage Company	Docket No. CP10-23	Market Power
Arizona Public Service Company	3/10	El Paso Natural Gas Company	Docket No. RP08-426	Rate Design
Arlington Storage Company, LLC	3/10	Arlington Storage Company LLC	Docket No. CP10-99	Market Power
Tallulah Gas Storage, LLC	8/10	Tallulah Gas Storage, LLC	Docket No. CP10-494	Market Power
Rager Mountain Storage Co. LLC	10/10	Rager Mountain Storage Co. LLC	Docket No. CP11-5	Market Power
Central New York Oil & Gas Company, LLC	3/11	Central New York Oil & Gas Company, LLC	Docket No. CP10-194	Market Power
Federal Energy Regulatory Commission				
Rager Mountain Storage Co. LLC	3/11	Rager Mountain Storage Co. LLC	Docket No. CP11-5	Market Power
Arizona Public Service Company	6/11	El Paso Natural Gas Company	Docket No. RP10-1398	Cost Allocation/ Rate Design
Arizona Public Service Company	8/11	El Paso Natural Gas Company	Docket No. RP10-1398	Cost Allocation/ Rate Design
UGI Storage Company	8/11	UGI Storage Company	Docket No. CP11-542	Market Power
Central New York Oil & Gas Company, LLC	2/12	Central New York Oil & Gas Company, LLC	Docket No. CP10-194	Market Power
Worsham-Steed Gas Storage LLC	5/12	Worsham-Steed Gas Storage LLC	Docket No. PR07-6	Market Power

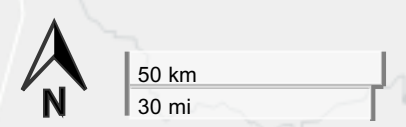
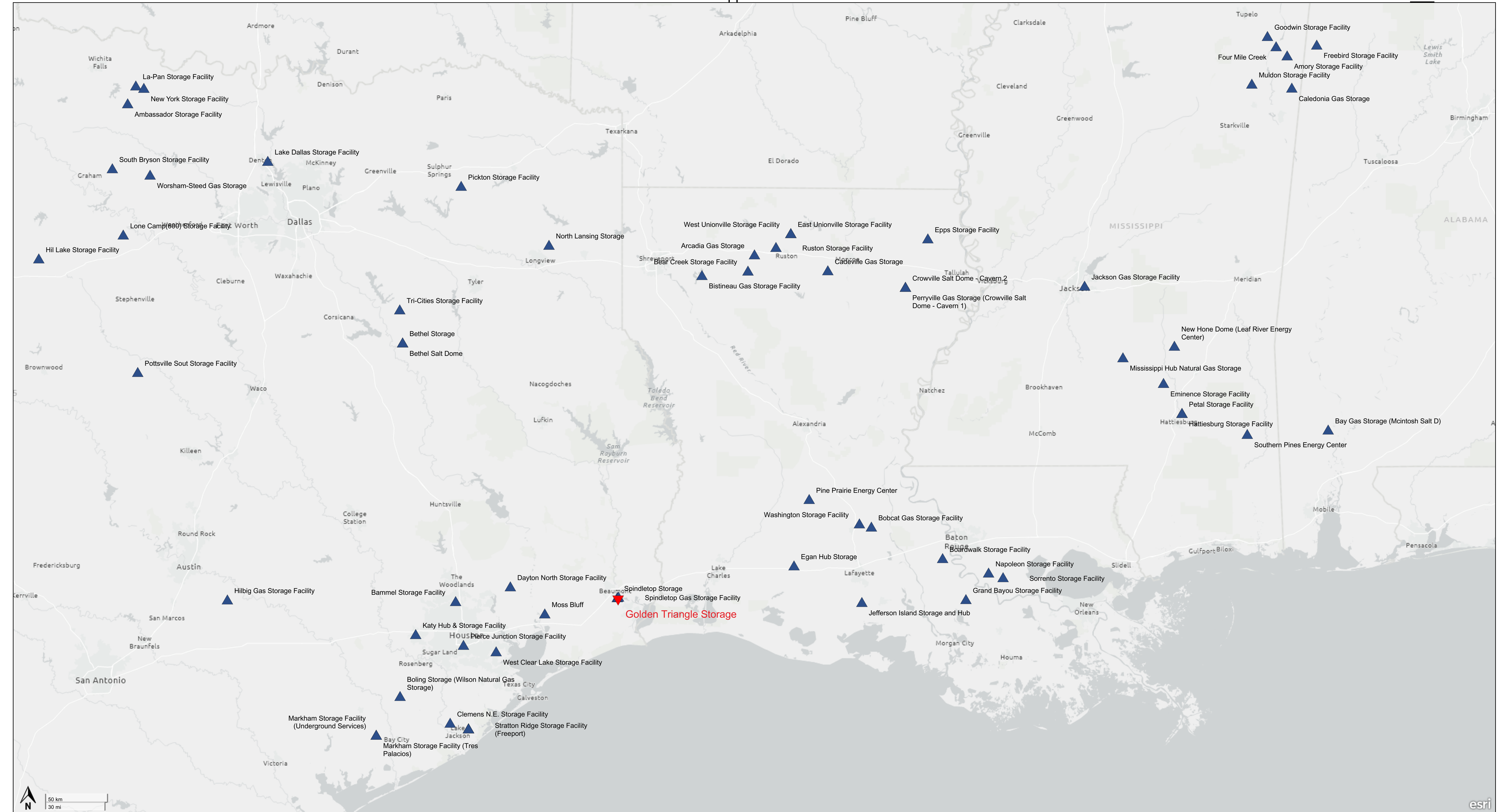
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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Rager Mountain Storage Co. LLC	1/14	Rager Mountain Storage Co. LLC	Docket No. CP13-139	Market Power
PennEast Pipeline Company, LLC	9/15	PennEast Pipeline Company, LLC	Docket No. CP15-558	Mkt. Conditions/Need
Magnum Gas Storage, LLC	11/15	Magnum Gas Storage, LLC	Docket No. CP16-18	Market Power
PennEast Pipeline Company, LLC	4/16	PennEast Pipeline Company, LLC	Docket No. CP15-558	Mkt. Conditions/Need
PennEast Pipeline Company, LLC	10/16	PennEast Pipeline Company, LLC	Docket No. CP15-558	Mkt. Conditions/Need/ Rate of Return
Costco Wholesale Corp.	1/17	Tricon Energy Ltd. and Rockbriar Partners Inc. v. Colonial Pipeline Company	Docket No. OR16-17	Petroleum/Refined Products Pipeline Capacity Prorationing
Laclede Gas Company	1/17	Spire STL Pipeline, LLC	Docket No. CP17-40	Mkt. Conditions/Need
East Cheyenne Gas Storage, LLC	11/17	East Cheyenne Gas Storage, LLC	Docket No. CP18-11	Market Power
Spire Storage West, LLC	7/18	Spire Storage West, LLC	Docket No. CP18-520	Market Power
Washington 10 Storage Corp.	5/20	Washington 10 Storage Corp.	Docket No. CP20-470	Market Power
Spire Storage West, LLC	10/20	Spire Storage West, LLC	Docket No. CP21-6	Market Power
East Cheyenne Gas Storage, LLC	6/22	East Cheyenne Gas Storage, LLC	Docket No. RP22-872	Market Power
Pennsylvania Public Utility Commission				
UGI Utilities, Inc.	6/20	UGI Utilities, Inc.	Docket No. R-2019-301562	Economic Impacts of New Infrastructure
Columbia Gas of Pennsylvania, Inc.	8/20	Columbia Gas of Pennsylvania, Inc.	Docket No. R-2019-3018835	Economic Impacts of New Infrastructure
Pennsylvania-American Water Co.	9/20	Pennsylvania-American Water Co.	Docket Nos. R-2020-3019369 and R-2020-3019371	Economic Impacts of New Infrastructure

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
National Energy Board of Canada				
TransCanada Pipelines Ltd.	12/13	TransCanada Pipelines Ltd.	MH-1-2013	Cost Allocation
NOVA Gas Transmission Ltd.	10/17	NOVA Gas Transmission Ltd.	MH-031-2017	Tolling Policy for New Facilities
NOVA Gas Transmission Ltd.	12/17	NOVA Gas Transmission Ltd.	MH-031-2017	Tolling Policy for New Facilities
NOVA Gas Transmission Ltd.	3/19	NOVA Gas Transmission Ltd.	RH-001-2019	Tolling Policy for New Facilities
Canada Energy Regulator				
NOVA Gas Transmission Ltd.	11/19	NOVA Gas Transmission Ltd.	RH-001-2019	Tolling Policy for New Facilities
NOVA Gas Transmission Ltd.	5/21	NOVA Gas Transmission Ltd.	RH-001-2021	Tolling Policy for New Service
NOVA Gas Transmission Ltd.	12/21	NOVA Gas Transmission Ltd.	RH-001-2021	Tolling Policy for New Service
Nova Scotia Utility and Review Board				
Nova Scotia Power Inc.	6/19	Nova Scotia Power Inc.	M09273	Contracting Prudence / Market Conditions
British Columbia Utilities Commission				
Unocal Canada Limited	10/06	Unocal Canada Limited	Project No. 3698445	Market Power

Appendix B



Golden Triangle Storage, Inc.

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Appendix C

Working Gas
Market Share and Market Concentration Analysis

Line No.	Company	Working Gas (MMcf)	Market Share	HHI
	(a)	(b)	(c)	(d)
1	Caliche Development Partners LLC	30,400	2.5%	6
2	ArcLight Capital Partners LLC	24,000	2.0%	4
3	Atmos Energy Corp.	47,991	3.9%	15
4	Brookfield Corp.	36,000	2.9%	9
5	Dow Inc.	760	0.1%	0
6	Enbridge Inc.	110,477	9.0%	81
7	Energy Transfer LP	129,140	10.5%	110
8	EnLink Midstream LLC	17,456	1.4%	2
9	Enterprise Products Partners	14,110	1.1%	1
10	Freeport LNG	4,500	0.4%	0
11	Hartree Bulk Storage LLC	146,750	11.9%	143
12	J.P. Morgan Investment Management Inc.	96,916	7.9%	62
13	Kinder Morgan, Inc.	234,060	19.0%	363
14	Loews Corp.	128,777	10.5%	110
15	Lower Colorado River Authority	4,000	0.3%	0
16	New Jersey Resources Corp.	30,047	2.4%	6
17	Northwest Alabama Gas District	1,456	0.1%	0
18	Phillips 66	10,423	0.8%	1
19	Southern Company	32,800	2.7%	7
20	The Williams Companies Inc.	121,780	9.9%	98
21	WSP USA Inc.	6,870	0.6%	0
22	Total	1,228,713	100.0%	1019

Sources:

Energy Information Administration, Natural Gas Annual Respondent Query System, data available as of May 2023, as adjusted based on research regarding ownership positions and capabilities from prior Commission orders and company websites.

Golden Triangle Storage, Inc.
Docket No. CP23-___-000

Appendix C

Working Gas Market Share and Market Concentration Analysis

Line No.	Company/Facility	State	Percent Ownership	Working Gas (MMcf)
	(a)	(b)	(c)	(d)
1	Caliche Development Partners LLC			
2	Golden Triangle/Spindletop	TX	100%	30,400
3	Subtotal			30,400
4				
5	ArcLight Capital Partners LLC			
6	North Lansing	TX	25%	24,000
7	Subtotal			24,000
8	Atmos Energy Corp.			
9	Amory	MS	100%	995
10	Bethel	TX	100%	6,206
11	Goodwin	MS	100%	913
12	Lake Dallas	TX	100%	2,960
13	La-Pan	TX	100%	3,425
14	New York	TX	100%	5,650
15	Tri-Cities	TX	100%	27,842
16	Subtotal			47,991
17	Brookfield Corp.			
18	North Lansing	TX	38%	36,000
19	Subtotal			36,000
20	Dow Inc.			
21	Stratton Ridge	TX	100%	760
22	Subtotal			760
23	Enbridge Inc.			
24	Bobcat	LA	100%	28,460
25	Egan	LA	100%	22,470
26	Markham	TX	100%	34,910
27	Moss Bluff	TX	100%	21,460
28	Spindletop	TX	23%	3,177
29	Subtotal			110,477
30	Energy Transfer LP			
31	Bammel	TX	100%	52,500
32	Bethel	TX	100%	7,083
33	East Unionville	LA	100%	36,100
34	Epps	LA	100%	13,000
35	Ruston	LA	100%	4,000
36	South Bryson	TX	100%	4,992
37	West Unionville	LA	100%	11,466
38	Subtotal			129,140

Golden Triangle Storage, Inc.

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Appendix C

**Working Gas
Market Share and Market Concentration Analysis**

Line No.	Company/Facility	State	Percent Ownership	Working Gas (MMcf)
	(a)	(b)	(c)	(d)
39	EnLink Midstream LLC			
40	Jefferson Island	LA	100%	5,733
41	Lone Camp	TX	100%	713
42	Napoleon	LA	100%	7,752
43	Sorrento	LA	100%	3,258
44	Subtotal			17,456
45	Enterprise Products Partners			
46	Boling	TX	100%	12,510
47	Grand Bayou	LA	100%	1,600
48	Subtotal			14,110
49	Freeport LNG			
50	Stratton Ridge	TX	100%	4,500
51	Subtotal			4,500
52	Hartree Bulk Storage LLC			
53	Arcadia	LA	100%	15,200
54	Cadeville	LA	100%	17,000
55	Four Mile Creek	MS	100%	6,700
56	Perryville	LA	100%	11,850
57	Pine Prairie	LA	100%	56,000
58	Southern Pines	MS	100%	40,000
59	Subtotal			146,750
60	J.P. Morgan Investment Management Inc.			
61	Bond	MS	100%	23,222
62	Caledonia	MS	100%	18,500
63	East Detroit	AL	87%	9,744
64	Katy Hub & Storage	TX	100%	23,500
65	McIntosh	AL	100%	21,950
66	Subtotal			96,916
67	Kinder Morgan, Inc.			
68	Bear Creek	LA	75%	44,400
69	Dayton North	TX	100%	11,000
70	Markham	TX	100%	21,670
71	Muldon	MS	50%	18,000
72	North Lansing	TX	38%	36,000
73	Pierce Junction	TX	100%	2,230
74	Stratton Ridge	TX	100%	1,410
75	West Clear Lake	TX	100%	99,350
76	Subtotal			234,060

Golden Triangle Storage, Inc.
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Appendix C

Working Gas
Market Share and Market Concentration Analysis

Line No.	Company/Facility	State	Percent Ownership	Working Gas (MMcf)
	(a)	(b)	(c)	(d)
77	Loews Corp.			
78	Bistineau	LA	100%	85,745
79	Boardwalk	LA	100%	7,600
80	Jackson	MS	100%	5,803
81	Petal/Hattiesburg	MS	100%	29,629
82	Subtotal			128,777
83	Lower Colorado River Authority			
84	Hilbig	TX	100%	4,000
85	Subtotal			4,000
86	New Jersey Resources Corp.			
87	New Home	MS	100%	30,047
88	Subtotal			30,047
89	Northwest Alabama Gas District			
90	East Detroit	AL	13%	1,456
91	Subtotal			1,456
92	Phillips 66			
93	Spindletop	TX	77%	10,423
94	Subtotal			10,423
95	Southern Company			
96	Bear Creek	LA	25%	14,800
97	Muldon	MS	50%	18,000
98	Subtotal			32,800
99	The Williams Companies Inc.			
100	Eminence	MS	100%	10,048
101	Hill Lake	TX	100%	9,879
102	Washington	LA	100%	75,000
103	Worsham Steed	TX	100%	26,853
104	Subtotal			121,780
105	WSP USA Inc.			
106	Spindletop	TX	100%	6,870
107	Subtotal			6,870
108	Total			1,228,713

Appendix D

Deliverability
Market Share and Market Concentration Analysis

Line No.	Company	Maximum Withdrawal Capability (MMcf/d)	Market Share	HHI
	(a)	(b)	(c)	(d)
1	Caliche Development Partners LLC	1,540	3.4%	12
2	ArcLight Capital Partners LLC	310	0.7%	0
3	Atmos Energy Corp.	1,624	3.6%	13
4	Brookfield Corp.	465	1.0%	1
5	Dow Inc.	100	0.2%	0
6	Enbridge Inc.	8,117	17.9%	321
7	Energy Transfer LP	2,675	5.9%	35
8	EnLink Midstream LLC	1,487	3.3%	11
9	Enterprise Products Partners	745	1.6%	3
10	Freeport LNG	500	1.1%	1
11	Hartree Bulk Storage LLC	7,628	16.8%	283
12	J.P. Morgan Investment Management Inc.	5,115	11.3%	127
13	Kinder Morgan, Inc.	4,715	10.4%	108
14	Loews Corp.	4,548	10.0%	101
15	Lower Colorado River Authority	110	0.2%	0
16	New Jersey Resources Corp.	1,300	2.9%	8
17	Northwest Alabama Gas District	40	0.1%	0
18	Phillips 66	383	0.8%	1
19	Southern Company	600	1.3%	2
20	The Williams Companies Inc.	2,838	6.3%	39
21	WSP USA Inc.	480	1.1%	1
22	Total	45,320	100.0%	1067

Sources:

Energy Information Administration, Natural Gas Annual Respondent Query System, data available as of May 2023, as adjusted based on research regarding ownership positions and capabilities from prior Commission orders and company websites.

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Appendix D

Deliverability Market Share and Market Concentration Analysis

Line No.	Company/Facility (a)	State (b)	Percent Ownership (c)	Maximum Withdrawal Capability (MMcf/d) (d)
1	Caliche Development Partners LLC			
2	Golden Triangle/Spindletop	TX	100%	1,540
3	Subtotal			1,540
4				
5	Arclight Capital Partners LLC			
6	North Lansing	TX	25%	310
7	Subtotal			310
8	Atmos Energy Corp.			
9	Amory	MS	100%	25
10	Bethel	TX	100%	600
11	Goodwin	MS	100%	6
12	Lake Dallas	TX	100%	153
13	La-Pan	TX	100%	120
14	New York	TX	100%	120
15	Tri-Cities	TX	100%	600
16	Subtotal			1,624
17	Brookfield Corp.			
18	North Lansing	TX	38%	465
19	Subtotal			465
20	Dow Inc.			
21	Stratton Ridge	TX	100%	100
22	Subtotal			100
23	Enbridge Inc.			
24	Bobcat	LA	100%	2,000
25	Egan	LA	100%	2,500
26	Markham	TX	100%	2,500
27	Moss Bluff	TX	100%	1,000
28	Spindletop	TX	23%	117
29	Subtotal			8,117
30	Energy Transfer LP			
31	Bammel	TX	100%	1,200
32	Bethel	TX	100%	400
33	East Unionville	LA	100%	490
34	Epps	LA	100%	150
35	Ruston	LA	100%	70
36	South Bryson	TX	100%	175
37	West Unionville	LA	100%	190
38	Subtotal			2,675

Golden Triangle Storage, Inc.
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Appendix D

Deliverability Market Share and Market Concentration Analysis

Line No.	Company/Facility (a)	State (b)	Percent Ownership (c)	Maximum Withdrawal Capability (MMcf/d) (d)
39	EnLink Midstream LLC			
40	Jefferson Island	LA	100%	720
41	Lone Camp	TX	100%	27
42	Napoleon	LA	100%	500
43	Sorrento	LA	100%	240
44	Subtotal			1,487
45	Enterprise Products Partners			
46	Boling	TX	100%	520
47	Grand Bayou	LA	100%	225
48	Subtotal			745
49	Freeport LNG			
50	Stratton Ridge	TX	100%	500
51	Subtotal			500
52	Hartree Bulk Storage LLC			
53	Arcadia	LA	100%	900
54	Cadeville	LA	100%	250
55	Four Mile Creek	MS	100%	237
56	Perryville	LA	100%	641
57	Pine Prairie	LA	100%	3,200
58	Southern Pines	MS	100%	2,400
59	Subtotal			7,628
60	J.P. Morgan Investment Management Inc.			
61	Bond	MS	100%	1,200
62	Caledonia	MS	100%	550
63	East Detroit	AL	87%	265
64	Katy Hub & Storage	TX	100%	700
65	McIntosh	AL	100%	2,400
66	Subtotal			5,115
67	Kinder Morgan, Inc.			
68	Bear Creek	LA	75%	675
69	Dayton North	TX	100%	875
70	Markham	TX	100%	1,080
71	Muldon	MS	50%	375
72	North Lansing	TX	38%	465
73	Pierce Junction	TX	100%	250
74	Stratton Ridge	TX	100%	100
75	West Clear Lake	TX	100%	895
76	Subtotal			4,715

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Appendix D
Deliverability
Market Share and Market Concentration Analysis

Line No.	Company/Facility	State	Percent Ownership	Maximum Withdrawal Capability (MMcf/d)
	(a)	(b)	(c)	(d)
77	Loews Corp.			
78	Bistineau	LA	100%	1,200
79	Boardwalk	LA	100%	550
80	Jackson	MS	100%	303
81	Petal/Hattiesburg	MS	100%	2,495
82	Subtotal			4,548
83	Lower Colorado River Authority			
84	Hilbig	TX	100%	110
85	Subtotal			110
86	New Jersey Resources Corp.			
87	New Home	MS	100%	1,300
88	Subtotal			1,300
89	Northwest Alabama Gas District			
90	East Detroit	AL	13%	40
91	Subtotal			40
92	Phillips 66			
93	Spindletop	TX	77%	383
94	Subtotal			383
95	Southern Company			
96	Bear Creek	LA	25%	225
97	Muldon	MS	50%	375
98	Subtotal			600
99	The Williams Companies Inc.			
100	Eminence	MS	100%	1,198
101	Hill Lake	TX	100%	350
102	Washington	LA	100%	790
103	Worsham Steed	TX	100%	500
104	Subtotal			2,838
105	WSP USA Inc.			
106	Spindletop	TX	100%	480
107	Subtotal			480
108	Total			45,320

Appendix E

Bingo Card Analysis
Interconnections Available to Pipelines Interconnected to Golden Triangle Storage

		Delivering Pipeline (Mcf/d)					
		Texas Eastern	Florida Gas Transmission	Golden Pass Pipeline	Houston Pipe Line (intrastate)	Kinder Morgan Texas (intrastate)	Centana Intrastate Pipeline (intrastate)
Receiving Pipeline (MMcf/d)	Texas Eastern		122,125	600,000	310,401	400,000	266,479
	Florida Gas Transmission	122,125		250,000	494,000	110,000	82,000
	Golden Pass Pipeline	1,500,000	122,125		900,000	1,882,000	266,479
	Houston Pipe Line (intrastate)	55,329	100,000	1,472,715		[1]	[1]
	Kinder Morgan Texas (intrastate)	400,000	122,125	421,000	[1]		[1]
	Centana Intrastate Pipeline (intrastate)	266,479	266,479	266,479	[1]	[1]	

Source: Pipeline informational postings; company websites; FERC filings.

Note, Golden Triangle also has an existing delivery-only interconnection with the Natgasoline plant. The Natgasoline plant is currently also interconnected with TETCO, and also notes on its website that it is located near six interstate pipelines (see, <https://www.natgasoline.com/about/>). Therefore, there are many alternatives for natural gas to be supplied to Natgasoline other than through Golden Triangle’s wheeling services.

[1] Interconnection points and capacities between intrastate pipelines are not publicly available. Note, the Commission has previously recognized the vast number of pipeline interconnections that are available between interstate and intrastate pipelines in the Gulf Coast Production Area and has authorized firm and interruptible wheeling services at market-based rates without information regarding the pipeline interconnections between intrastate pipelines being publicly available (see, e.g., Enstor Katy Gas Storage and Transportation, L.P., 172 FERC ¶ 61,245 (2020)).

Appendix E

Market Share and Market Concentration Analysis of
Delivery and Receipt Capacity of Pipeline Interconnects
in Proximity to Golden Triangle Storage

Line No.	Pipeline / Point Name (a)	County (b)	State (c)	Notes (d)	Capacity (Mcf/d) (e)
Texas Eastern Deliveries to:					
1	<u>Florida Gas Transmission</u> Krotz Springs	St. Landry	LA		122,125
2	<u>Golden Pass Pipeline</u> GOLDEN PASS PIPELINE - CALCASIEU PARISH, LA	Calcasieu	LA	[1]	1,500,000
3	<u>Houston Pipe Line</u> Houston Pipe Line Co.-Enerfin Lyondell Sys.	Harris	TX		55,329
4	<u>Kinder Morgan Texas</u> via Moss Bluff Hub/Texas Eastern	Liberty	TX		400,000
5	<u>Centana Intrastate</u> Centana Intra P/L, Storage - Jefferson, Co.	Jefferson	TX		266,479
Florida Gas Transmission Deliveries to:					
6	<u>Texas Eastern</u> Krotz Springs	St. Landry	LA		122,125
7	<u>Golden Pass Pipeline</u> via Texas Eastern	Orange	TX	[2]	122,125
8	<u>Houston Pipe Line</u> Robert Radley	Jackson	TX	[3]	-
9	HPL Texas City	Galveston	TX		100,000
10	Subtotal				<u>100,000</u>
11	<u>Kinder Morgan Texas</u> via Texas Eastern/KM Tejas (Clear Lake)	St. Landry / Harris	LA / TX		122,125
12	via Texas Eastern/KM Tejas (Agua Dulce)	St. Landry / Nueces	LA / TX		<u>122,125</u>
					122,125
13	<u>Centana Intrastate</u> via Texas Eastern	Jefferson	TX		266,479
Golden Pass Pipeline Deliveries to:					
14	<u>Texas Eastern</u> Texas Eastern	Calcasieu Parish	LA		600,000
15	<u>Florida Gas Transmission</u> Golden Pass (Rec)	Orange	TX		250,000
16	<u>Houston Pipe Line</u> Texoma	Orange	TX		1,053,000
17	via Texas Eastern	Harris	TX		55,329
18	via Florida Gas Transmission	Galveston	TX		100,000
19	via Transcontinental Pipe Line Co	Harris	TX		<u>264,386</u>
20	Subtotal				<u>1,472,715</u>
21	<u>Kinder Morgan Texas</u> GLDNPASS/KMTP HWY 365 @ HILDEBRANDT	Jefferson	TX		421,000
22	<u>Centana Intrastate</u> via Texas Eastern	Jefferson	TX		266,479

Appendix E

Market Share and Market Concentration Analysis of
Delivery and Receipt Capacity of Pipeline Interconnects
in Proximity to Golden Triangle Storage

Line No.	Pipeline / Point Name (a)	County (b)	State (c)	Notes (d)	Capacity (Mcf/d) (e)
Houston Pipe Line Deliveries to:					
<u>Texas Eastern</u>					
23	HOUSTON PIPELINE VIDOR	Orange	TX		310,401
<u>Florida Gas Transmission</u>					
24	HPL Magnet Withers	Matagorda	TX		94,000
25	HPL Texoma (Rec)	Orange	TX		400,000
26	Subtotal				494,000
<u>Golden Pass Pipeline</u>					
27	Texoma	Orange	TX	[1]	900,000
Kinder Morgan Texas Deliveries to:					
<u>Texas Eastern</u>					
28	via Moss Bluff Hub	Liberty	TX		400,000
<u>Florida Gas Transmission</u>					
29	via Moss Bluff Hub/KM Tejas	Liberty	TX		110,000
<u>Golden Pass Pipeline</u>					
30	via Moss Bluff Hub/Houston Pipe Line	Liberty	TX	[1]	275,000
31	via Moss Bluff Hub/Natural Gas Pipe Line Co of America	Liberty	TX	[1]	400,000
32	via Moss Bluff Hub/Texas Eastern	Liberty	TX	[1]	400,000
33	via Henry Hub/Natural Gas Pipe Line Co of America	Jefferson	TX	[1]	40,000
34	via Katy Hub/Transcontinental Pipeline	Fort Bend/Waller	TX	[1]	220,000
35	via Katy Hub/Tennessee Gas Pipeline	Fort Bend/Waller	TX	[1]	200,000
36	via Katy Hub/Houston Pipe Line	Fort Bend/Waller	TX	[1]	160,000
37	via Katy Hub/Natural Gas Pipe Line Co of America	Fort Bend/Waller	TX	[1]	187,000
38	Subtotal				1,882,000
Centana Intrastate Deliveries to:					
<u>Texas Eastern</u>					
39	Centana Intra P/L, Storage - Jefferson, Co.	Jefferson	TX		266,479
<u>Florida Gas Transmission</u>					
40	Centana Jefferson	Jefferson	TX		82,000
<u>Golden Pass Pipeline</u>					
41	via Texas Eastern	Jefferson	TX		266,479

[1] Reflects bi-directional capability of Golden Pass Pipeline's meters approved by the Commission in 157 FERC ¶ 61,222 (2016), and which are currently under construction. See also, Docket No. RP15-132-000, Golden Triangle Storage Inc., Response to February 5, 2015 Data Request Pursuant to § 375.307, May 6, 2015, pdf p. 107)

[2] Deliveries are achieved via capacity held on another pipeline (as noted).

[3] Interconnection listed on pipeline's informational postings; however, no operating capacity reported.

Appendix F

Market Share and Market Concentration Analysis of
Delivery and Receipt Capacity of Hubs/Pipeline Interconnects
in Proximity to Golden Triangle

Line No.	Hub	Pipeline Interconnections	County	State	Notes	Receipt Capacity (Mcf/d)	Market Share	HHI	Delivery Capacity (Mcf/d)	Market Share	HHI
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	Golden Triangle Storage	Centana Intrastate	Jefferson	TX		100,000			100,000		
2		Florida Gas Transmission	Orange	TX		250,000			250,000		
3		Golden Pass Pipeline	Jefferson	TX		250,000			250,000		
4		Houston Pipe Line	Orange	TX		250,000			250,000		
5		Kinder Morgan Texas	Jefferson	TX		100,000			100,000		
6		Texas Eastern Transmission	Orange	TX		250,000			250,000		
7		Natgasoline	Jefferson	TX		0			165,000		
8		Total Golden Triangle				1,200,000	1.4%	2	1,365,000	1.5%	2
9	Agua Dulce Hub	Eagle Ford Midstream	Nueces	TX		0			449,075		
10		Enterprise Intrastate	Nueces	TX		610,039			610,039		
11		Enterprise Texas Pipeline	Nueces	TX		0			113,760		
12		Kinder Morgan Tejas	Nueces	TX		131,284			0		
13		Natural Gas Pipeline Co of America	Nueces	TX		1,700,000			925,000		
14		NET Mexico Pipeline Partners	Nueces	TX		937,500			1,012,500		
15		Tennessee Gas Pipeline	Nueces	TX		2,715,374			1,840,039		
16		Texas Eastern Transmission	Nueces	TX		396,000			527,284		
17		Transcontinental Gas Pipe Line	Nueces	TX		1,046,746			805,246		
18		Valley Crossing Pipeline	Nueces	TX		2,418,746			2,418,746		
19		Whistler Pipeline	Nueces	TX		0			1,254,000		
20		Total Agua Dulce				9,955,689	11.6%	135	9,955,689	10.8%	117
21	Banquete Hub	Natural Gas Pipeline Co of America	Nueces	TX		200,000			200,000		
22		Tennessee Gas Pipeline	Nueces	TX		188,600			188,600		
23		Kinder Morgan Tejas	Nueces	TX		179,756			402,623		
24		Enterprise Texas Pipeline	Nueces	TX		300,000			300,000		
25		Targa Resources (formerly Southcross Energy Pa	Nueces	TX		140,000			0		
26		Transcontinental Gas Pipe Line	Nueces	TX		0			100,000		
27		Total Banquete Hub				1,008,356	1.2%	1	1,191,223	1.3%	2
28	Arcadia Gas Storage	Enable Gas Transmission	Bienville	LA		250,000			250,000		
29		ETC Tiger Pipeline	Bienville	LA		250,000			250,000		
30		Gulf Run Pipeline	Bienville	LA		500,000			500,000		
31		Gulf South Pipeline	Bienville	LA		250,000			250,000		
32		Pelico Pipeline	Bienville	LA		125,000			125,000		
33		PennTex Midstream	Bienville	LA		200,000			200,000		
34		Regency Intrastate Gas	Bienville	LA		120,000			120,000		
35		Subtotal				1,695,000			1,695,000		
36	Pine Prairie Energy Center	ANR Pipeline	Evangeline/Acadia	LA		1,200,000			1,200,000		
37		Columbia Gulf Transmission	Evangeline	LA		797,000			797,000		
38		Florida Gas Transmission	Acadia	LA		400,000			400,000		
39		Kinder Morgan Louisiana Pipeline	Acadia	LA		600,000			600,000		
40		Texas Eastern Transmission	Evangeline	LA		600,000			600,000		
41		Tennessee Gas Pipeline	Rapides	LA		900,000			900,000		
42		Transcontinental Gas Pipe Line	Evangeline	LA		900,000			900,000		
43		Texas Gas Transmission	Evangeline	LA		600,000			600,000		
44		Subtotal				5,997,000			5,997,000		
45	Southern Pines Energy Center	Destin Pipeline	Greene	MS		600,000			600,000		
46		Florida Gas Transmission	Mobile	AL		1,500,000			1,500,000		
47		Southeast Supply Header	Greene	MS		433,000			433,000		
48		Transcontinental Gas Pipe Line	Mobile	AL		600,000			600,000		
49		Subtotal				3,133,000			3,133,000		
50	Monroe Gas Storage	Atmos Energy	Monroe	MS		0			50,000		
51		Tennessee Gas Pipeline	Lamar	AL		500,000			500,000		
52		Texas Gas Transmission	Monroe	MS		500,000			500,000		
		Subtotal				1,000,000			1,050,000		
53	Cadeville Gas Storage	ETC Tiger Pipeline	Ouachita	LA		250,000			250,000		
54		Gulf Run Pipeline	Ouachita	LA		250,000			250,000		
55		Subtotal				500,000			500,000		
56	Perryville Gas Storage	Columbia Gulf Pipeline	Franklin	LA		500,000			500,000		
57		Gulf Run Pipeline	Richland	LA		600,000			600,000		
58		Subtotal				1,100,000			1,100,000		
59		Total Affiliated Hubs (Hartree Partners)				13,425,000	15.7%	246	13,475,000	14.6%	214
60	Bay Gas Storage	Florida Gas Transmission	Mobile	AL		1,620,000			1,620,000		
61		Gulf South Pipeline	Mobile	AL		400,500			400,500		
62		Transcontinental Gas Pipe Line	Mobile	AL		1,600,000			1,600,000		
63		Subtotal				3,620,500			3,620,500		
64	Mississippi Hub	Southeast Supply Header	Covington	MS		400,000			400,000		
65		Southern Natural Gas Co	Simpson	MS		800,000			800,000		
66		Transcontinental Gas Pipe Line	Covington	MS		750,000			750,000		
67		Subtotal				1,950,000			1,950,000		

Appendix F

Market Share and Market Concentration Analysis of
Delivery and Receipt Capacity of Hubs/Pipeline Interconnects
in Proximity to Golden Triangle

Line No.	Hub	Pipeline Interconnections	County	State	Notes	Receipt Capacity (Mcf/d)	Market Share	HHI	Delivery Capacity (Mcf/d)	Market Share	HHI
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	Katy Storage Hub	Aspen	Fort Bend/Waller	TX	[1]	250,000			250,000		
2		Atmos Pipeline - Texas	Fort Bend/Waller	TX		230,000			230,000		
3		DCP Midstream	Fort Bend/Waller	TX		160,000			160,000		
4		Dow Pipeline	Fort Bend/Waller	TX		160,000			160,000		
5		Gulf South Pipeline	Fort Bend/Waller	TX		160,000			160,000		
6		Houston Pipe Line	Fort Bend/Waller	TX		160,000			160,000		
7		Kinder Morgan Tejas Pipeline (Mustang)	Fort Bend/Waller	TX		165,000			165,000		
8		Kinder Morgan Tejas Pipeline (Ship Channel)	Fort Bend/Waller	TX		150,000			150,000		
9		Kinder Morgan Texas Pipeline	Fort Bend/Waller	TX		220,000			220,000		
10		Monument Pipeline	Fort Bend/Waller	TX		0			150,000		
11		Natural Gas Pipeline Co of America	Fort Bend/Waller	TX		187,000			187,000		
12		Oasis Pipeline	Fort Bend/Waller	TX		480,000			480,000		
13		Tennessee Gas Pipeline	Fort Bend/Waller	TX		200,000			200,000		
14		Transcontinental Gas Pipe Line	Fort Bend/Waller	TX		384,000			328,000		
15		Trunkline Gas Co	Fort Bend/Waller	TX		0			200,000		
16		Subtotal				2,906,000			3,200,000		
17		Total Affiliated Hubs (J.P. Morgan)				5,570,500	6.5%	42	5,570,500	6.0%	37
18	Bobcat Gas Storage	Texas Eastern Transmission	St. Landry	LA		634,000			634,000		
19		Transcontinental Gas Pipe Line	St. Landry	LA		712,396			712,396		
20		Florida Gas Transmission	St. Landry	LA		150,000			150,000		
21		Gulf South Pipeline	St. Landry	LA		195,000			195,000		
22		ANR Pipeline	St. Landry	LA		325,000			150,000		
23		Subtotal				2,016,396			1,841,396		
24	Egan Storage	Targa Louisiana Field Svcs	Acadia	LA		0			37,473		
25		ANR Pipeline	Acadia	LA		412,000			412,000		
26		Columbia Gas Transmission	Acadia	LA		1,020,000			1,020,000		
27		Tennessee Gas Pipeline	Acadia	LA		552,431			552,490		
28		Texas Gas	Acadia	LA		395,000			395,000		
29		Trunkline Gas Co	Acadia	LA		408,000			408,000		
30		Florida Gas Transmission	Acadia	LA		275,000			275,000		
31		Texas Eastern Transmission	Evangeline	LA		900,000			900,000		
32		Kinder Morgan Louisiana Pipeline	Evangeline	LA		515,000			515,000		
33		Subtotal				4,477,431			4,514,963		
34	Nautilus Pipeline	Anaconda	Ship Shoal	LA		250,000			0		
35		Columbia Gulf Transmission	St. Mary	LA		150,000			0		
36		Acadian Gas Pipeline	St. Mary	LA		40,000			176,896		
37		Neptune Plant	St. Mary	LA		0			150,000		
38		Texas Gas Transmission	St. Mary	LA		0			0		
39		Louisiana Intrastate Gas	St. Mary	LA		0			203,933		
40		Gulf South Pipeline	St. Mary	LA		0			335,496		
41		ANR Pipeline	St. Mary	LA		0			167,970		
42		Tennessee Gas Pipeline	St. Mary	LA		0			329,677		
43		Manta Ray Gas Gathering	Ship Shoal	LA		886,081			0		
44		Subtotal				1,326,081			1,363,972		
45	Moss Bluff Hub	Houston Pipe Line	Liberty	TX	[2]	275,000			275,000		
46		Kinder Morgan Texas Pipeline	Liberty	TX	[2]	400,000			400,000		
47		Natural Gas Pipeline Co of America	Liberty	TX		465,878			493,025		
48		Kinder Morgan Tejas Pipeline	Liberty	TX	[2]	275,000			275,000		
49		Texas Eastern Transmission	Liberty	TX		684,266			684,266		
50		Subtotal				2,100,144			2,127,291		
51		Total Affiliated Hubs (Enbridge)				7,819,908	9.1%	83	7,720,331	8.4%	70
52	Carthage Hub	BTA ETG Gathering	Panola	TX		566,606			0		
53		DCP Midstream	Panola	TX		945,000			0		
54		Elevate Midstream Partners	Panola	TX		302,075			0		
55		Enable Gas Transmission	Panola	TX		372,000			2,982,346		
56		Enable Midstream Partners	Panola	TX		694,692			0		
57		Enterprise Products Operating	Panola	TX		1,850,867			0		
58		Enterprise Texas Pipeline	Panola	TX		344,810			104,961		
59		Gulf Run Transmission	Panola	TX		180,000			4,943,346		
60		Gulf South Pipeline	Panola	TX		0			3,942,503		
61		Houston Pipe Line Company	Panola	TX		4,986,000			1,652,000		
62		Markwest Energy East Texas Gas Company	Panola	TX		792,200			0		
63		Midcoast Pipelines (East Texas)	Panola	TX		1,368,255			0		
64		Tennessee Gas Pipeline	Panola	TX		104,961			192,525		
65		Texas Eastern Transmission	Panola	TX		0			152,285		
66		Texas Gas Transmission	Panola	TX		0			58,500		
67		Tiger Pipeline	Panola	TX		1,300,000			1,300,000		
68		Williams Partners	Panola	TX		1,521,000			0		
69		Total Carthage Hub				15,328,466	17.9%	320	15,328,466	16.6%	277

Appendix F

Market Share and Market Concentration Analysis of
Delivery and Receipt Capacity of Hubs/Pipeline Interconnects
in Proximity to Golden Triangle

Line No.	Hub	Pipeline Interconnections	County	State	Notes	Receipt Capacity (Mcf/d)	Market Share	HHI	Delivery Capacity (Mcf/d)	Market Share	HHI
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	Henry Hub	Acadian Gas Pipeline	Vermillion	LA		200,000			150,000		
2		Centana Intrastate Pipeline	Jefferson	TX		140,000			150,000		
3		Columbia Gulf Transmission	Vermillion	LA		130,000			280,000		
4		Florida Gas Transmission	Vermillion	LA		0			150,000		
5		Gulf South Pipeline	Vermillion	LA		400,000			400,000		
6		Houston Pipe Line	Jefferson	TX		100,000			0		
7		Jefferson Island Storage & Hub	Vermillion	LA		450,000			450,000		
8		Kinder Morgan Texas Pipeline	Jefferson	LA		40,000			40,000		
9		Kinder Morgan Louisiana Pipeline	Calcasieu	LA		200,000			200,000		
10		Bridgeline Holdings	Vermillion	LA		200,000			425,000		
11		Natural Gas Pipe Line	Vermillion	LA		500,000			500,000		
12		Sea Robin Pipeline	Vermillion	LA		250,000			0		
13		Southern Natural Gas Co	Vermillion	LA		125,000			160,000		
14		Kinder Morgan Tejas Pipeline	Jefferson	TX		115,000			60,000		
15		Texas Gas Transmission	Vermillion	LA		170,000			400,000		
16		Trunkline Gas Co	Vermillion/Calcasieu	LA		830,000			630,000		
17		Subtotal				3,850,000			3,995,000		
18	Jefferson Island Storage & Hub	Enlink LIG	Iberia, Vermillion	LA	[3]	200,000			200,000		
19		Columbia Gulf Transmission	Iberia, Vermillion	LA		323,000			323,000		
20		Gulf South Pipeline	Iberia, Vermillion	LA		200,000			200,000		
21		Natural Gas Pipeline Co of America	Iberia, Vermillion	LA		296,000			296,000		
22		Sea Robin Pipeline	Iberia, Vermillion	LA		212,000			0		
23		Sabine Pipe Line	Iberia, Vermillion	LA		450,000			450,000		
24		Tennessee Gas Pipeline	Iberia, Vermillion	LA		312,000			312,000		
25		Texas Gas Transmission	Iberia, Vermillion	LA		225,000			225,000		
26		Trunkline Gas Co	Iberia, Vermillion	LA		250,000			250,000		
27		Subtotal				2,468,000			2,256,000		
28		Total Affiliated Hubs (EnLink Midstream)				6,318,000	7.4%	54	6,251,000	6.8%	46
29	Leaf River Energy Center	Destin Pipeline	Clarke	MS		400,000			400,000		
30		Gulf South Pipeline	Jasper	MS		327,376			327,376		
31		Midcontinent Express	Jasper	MS		400,000			400,000		
32		Southern Natural Gas Co	Jasper	MS		1,138,614			1,138,614		
33		Tennessee Gas Transmission	Jasper	MS		461,250			461,250		
34		Transcontinental Gas Pipe Line	Clarke	MS		840,000			840,000		
35		Total Leaf River				3,567,240	4.2%	17	3,567,240	3.9%	15
36	LA Storage/Gillis Pipeline	Acadian Gas Pipeline	Beauregard	LA		1,000,000			0		
37		Cameron Interstate Pipeline	Cameron	LA		500,000			500,000		
38		Florida Gas Transmission	Calcasieu	LA		400,000			400,000		
39		DTE LEAP Gas Gathering	Beauregard	LA		250,000			0		
40		Tennessee Gas Pipeline	Calcasieu	LA		700,000			700,000		
41		Texas Eastern Transmission	Beauregard	LA		500,000			500,000		
42		Transcontinental Gas Pipeline	Beauregard	LA		1,000,000			1,000,000		
43		Trunkline Gas Company	Beauregard	LA		500,000			500,000		
44		Total LA Storage / Gillis Pipeline				4,850,000	5.7%	32	3,600,000	3.9%	15
45	Petal Gas Storage	Destin Pipeline	Clarke	MS		600,000			554,000		
46		Gulf South Pipeline	Jasper	MS		0			1,026,057		
47		Southeast Supply Header	Forrest	MS		724,500			724,500		
48		Southern Natural Gas Co	Clarke	MS		890,331			890,331		
49		Tennessee Gas Transmission	Forrest	MS		832,364			832,364		
50		Transcontinental Gas Pipe Line	Jasper	MS		1,468,165			1,468,165		
51		Total Petal Storage				4,515,360	5.3%	28	5,495,417	6.0%	36
52	Perryville Hub	Enable Gas Transmission	Madison/Ouachita/Richland	LA		2,100,000			5,521,863		
53		Gulf South Pipeline	Madison/Ouachita/Richland	LA		3,050,833			7,373,556		
54		Total Perryville Hub				5,150,833	6.0%	36	12,895,419	14.0%	196
55	Tres Palacios	Houston Pipe Line	Matagorda	TX	[4]	500,000			500,000		
56		Enterprise Texas Pipeline	Matagorda	TX		350,000			350,000		
57		Florida Gas Transmission	Matagorda	TX		350,000			350,000		
58		Gulf South Pipeline	Matagorda	TX		900,000			900,000		
59		Kinder Morgan Houston Central Plant	Matagorda	TX		600,000			0		
60		Kinder Morgan Tejas Pipeline	Matagorda	TX		350,000			350,000		
61		Natural Gas Pipe Line Co	Matagorda	TX		850,000			850,000		
62		Permian Highway Pipeline	Matagorda	TX		550,000			0		
63		Tennessee Gas Pipeline	Matagorda	TX		550,000			550,000		
64		Texas Eastern Transmission	Matagorda	TX		350,000			350,000		
65		Transcontinental Gas Pipe Line	Matagorda	TX		900,000			900,000		
66		Total Tres Palacios				6,250,000	7.3%	53	5,100,000	5.5%	31

Appendix F

Market Share and Market Concentration Analysis of
Delivery and Receipt Capacity of Hubs/Pipeline Interconnects
in Proximity to Golden Triangle

Line No.	Hub (a)	Pipeline Interconnections (b)	County (c)	State (d)	Notes (e)	Receipt Capacity (Mcf/d) (f)	Market Share (g)	HHI (h)	Delivery Capacity (Mcf/d) (i)	Market Share (j)	HHI (k)
1	Worsham-Steed Gas Storage	Atmos Pipeline - TX	Jack	TX		150,000			150,000		
2		Enbridge Pipeline (East TX)	Jack	TX		70,000			0		
3		Energy Transfer Partners	Jack	TX		250,000			250,000		
4		North Texas Pipeline	Jack	TX		150,000			150,000		
5		Enterprise Texas Intrastate	Jack	TX		100,000			100,000		
6		Total Worsham-Steed				720,000	0.8%	1	650,000	0.7%	0
7		Grand Total				85,679,352	100.0%	1051	92,165,285	100.0%	1056

Notes:

[1] Data from applicant's filing in Docket No. PR20-56.

[2] Data not reported by storage provider; reflects data from applicant's filing in Docket No. CP23-3.

[3] Data from applicant's filing in Docket No. PR21-7.

[4] Data from applicant's filing in Docket No. CP23-3.

Golden Triangle Storage, LLC

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Docket No. CP23-__-000

Exhibit M – Construction, Operation, and Management

Exhibit M

Construction, Operation, and Management

The proposed facilities for the Expansion Project, as defined in the Application, will be constructed by one or more independent construction firms or by Golden Triangle Storage, LLC (“GTS”) employees. The Existing Storage Facilities (as defined in the Application), as modified by the Expansion Project, will continue to be operated and managed by GTS and GTS employees. GTS will designate one or more company officials to oversee and direct management of the Expansion Project development, including costs, legal, engineering, and operations. Upon completion of the Expansion Project, one or more GTS company officials will continue to manage and direct operation of the facilities in accordance with market-based contractual agreements with suppliers and customers.

GTS will privately engage non-affiliated, legal, environmental, engineering and other specialized service firms for construction of the Expansion Project and additional support, as required. Companies engaged to provide such support will be qualified and selected as having proven experience in the areas of their specified involvement, specific to natural gas storage facility projects. The Project will be designed, constructed and operated in strict accordance with all applicable federal and state standards, codes and permits regulating the construction, operations and safety of underground natural gas storage facilities.

Golden Triangle Storage, LLC

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Docket No. CP23-__-000

Exhibit Z-1 – Form of Protective Agreement

PROTECTIVE AGREEMENT

THIS PROTECTIVE AGREEMENT (“Protective Agreement”) is made and entered into the ____ day of ____, 202__ (“Effective Date”), by and between Golden Triangle Storage, LLC (“GTS”), a Delaware limited liability company, and _____ (“Participant”), _____. GTS and Participant may be referred to collectively as the Parties and singularly as a Party.

WHEREAS, GTS submitted documents to the Federal Energy Regulatory Commission (“Commission” or “FERC”) in Docket No. CP23-____ (“Proceeding”);

WHEREAS, pursuant to Section 388.112(b) of the Commission's regulations, 18 C.F.R. § 388.112(b), this Protective Agreement applies to requests for access to the non-public version of any document or portion of a document filed or produced by GTS in this Proceeding;

WHEREAS, Participant desires to obtain access to non-public information in this Proceeding;

WHEREAS, Participant has provided a signed Non-Disclosure Certificate and agrees to comply with all terms of this Protective Agreement and the Commission’s regulations; and

WHEREAS, without waiving any claims of privilege or objections to any request for disclosure of documents, GTS agrees to disclose to Participant certain non-public information designated as privileged and/or Critical Energy Infrastructure Information (“CEII”), or other Protected Materials (as defined below), pursuant to the terms of this Protective Agreement.

NOW, THEREFORE, GTS and Participant agree as follows:

1. This Protective Agreement shall govern the use of all Protected Materials filed or produced by, or on behalf of, GTS in this Proceeding. Notwithstanding any order terminating this Proceeding, this Protective Agreement shall remain in effect until terminated or modified by mutual written agreement of the Parties, by order of the Commission or court of competent jurisdiction, or by order of a Presiding Administrative Law Judge (including the Chief Judge) in a proceeding set for hearing pursuant to 18 C.F.R. § 385 Subpart E.

2. This Protective Agreement applies to the following categories of materials, all constituting Protected Materials (as defined in Paragraph 3):

- (a) all materials filed or produced by GTS in this Proceeding and designated as (i) privileged, or (ii) privileged and not available to Competitive Duty Personnel (as defined below), or otherwise as Protected Materials which are customarily treated as sensitive or proprietary or if disclosed could risk of competitive disadvantage or other business injury;
- (b) all materials produced by GTS in this Proceeding and designated as CEII; and
- (c) all materials filed or produced in this Proceeding which reflect or disclose Protected Materials.

3. (a) (1) The term “Protected Materials” means (A) materials provided by GTS in this Proceeding including but not limited to any application, pleadings, response to data and/or

discovery requests and designated by GTS as protected; (B) any information contained in or obtained from such designated materials; (C) any other materials which are made subject to this Protective Agreement by the Commission, by any court or other body having appropriate authority, or by agreement of the Parties; (D) Notes of Protected Materials, as defined in Paragraph 3(a)(2); and (E) copies of Protected Materials GTS shall physically mark the Protected Material on each page as "CONTAINS PRIVILEGED INFORMATION - DO NOT RELEASE" or "CONTAINS PRIVILEGED INFORMATION AND NOT AVAILABLE TO COMPETITIVE DUTY PERSONNEL - DO NOT RELEASE" or with words of similar import as long as the term "Protected" and/or "Privileged" is included in that designation to indicate that they are Protected Materials. Protected Materials include any information or document contained in the files of the Commission that has been designated as CEII. If the Protected Materials contain CEII, such information shall be marked on each page with the words "CONTAINS CRITICAL ENERGY INFRASTRUCTURE INFORMATION - DO NOT RELEASE."

(2) The term "Notes of Protected Materials" means memoranda, handwritten notes, or any other form of information (including electronic form and audio recordings) which copies, reflects, or discloses materials described in Paragraph 3(a)(1). Notes of Protected Materials are subject to the same restrictions provided in this agreement for Protected Materials except as specifically provided in this agreement.

(3) Protected Materials shall not include (A) any information or document that has been filed with and accepted into the public files of the Commission, or contained in the public files of any other federal or state agency, or any federal or state court, unless the information or document has been determined to be protected by such agency or court, or (B) information that is public knowledge, or which becomes public knowledge, other than through disclosure in violation of this Protective Agreement.

(b) (1) The term "Non-Disclosure Certificate of Protected Materials Excluding Protected Materials Marked as Not Available to Competitive Duty Personnel" shall mean the certificate attached hereto by which representatives of Participant who have been granted access to Protected Materials, excluding Protected Materials marked as Not Available to Competitive Duty Personnel, shall certify their understanding that such access to Protected Materials is provided pursuant to the terms and restrictions of this Protective Agreement, and that such representatives have read the Protective Agreement and agree to be bound by it.

(2) The term "Non-Disclosure Certificate of Protected Materials Including Protected Materials Marked as Not Available to Competitive Duty Personnel" shall mean the certificate attached hereto by which representatives of Participant who have been granted access to Protected Materials marked as "Not Available to Competitive Duty Personnel" shall certify (i) that they do not perform any "Competitive Duty Personnel" functions, as described in Paragraph 23 of this Protective Agreement, (ii) their understanding that such access to Protected Materials is provided pursuant to the terms and restrictions of this Protective Agreement applicable to Protected Materials which are marked as "Not Available to Competitive Duty Personnel," and (iii) that such representatives have read the terms and restrictions of this Protective Agreement applicable to such materials and agree to be bound by them.

(c) Subject to the provisions of Paragraph 23, the term “Reviewing Representative” shall mean a person who has signed a Non-Disclosure Certificate and who is:

- (1) Commission Staff designated as such in this Proceeding;
- (2) an attorney who has made an appearance in this Proceeding for Participant;
- (3) attorneys, paralegals, and other employees associated for purposes of this Proceeding with an attorney described in Subparagraph (2);
- (4) an expert or an employee of an expert retained by Participant for the purpose of advising, preparing for or testifying in this Proceeding;
- (5) a person designated as a Reviewing Representative by order of the Commission; or
- (6) employees or other representatives of Participant appearing in this Proceeding with significant responsibility for this docket.

4. Protected Materials shall be made available under the terms of this Protective Agreement only to Participant and only through their Reviewing Representatives as provided in Paragraphs 7-9; provided that if the Protected Materials include rates, rate-related provisions, and/or credit support provisions, GTS may redact rates, rate-related provisions, and/or credit support provisions from the version of the Protected Materials provided to Participant’s Reviewing Representatives. In the event that GTS redacts any such information, if requested by Participant, the Parties shall meet to discuss the terms and conditions under which one or more of the Participant’s Reviewing Representatives may be provided such redacted information. If no agreement is reached, Participant may submit such dispute to the Commission or Presiding Judge, if any, for resolution.

5. Protected Materials shall remain available to Participants until the later of the date that an order terminating this proceeding becomes no longer subject to judicial review, or the date that any other Commission proceeding relating to the Protected Material is concluded and no longer subject to judicial review. If requested to do so in writing after that date, the Participant shall, within fifteen days of such request, return the Protected Materials (excluding Notes of Protected Materials) to GTS, or shall destroy the materials, except that copies of filings, official transcripts and exhibits in this proceeding that contain Protected Materials, and Notes of Protected Material may be retained, if they are maintained in accordance with Paragraph 6, below. Within such time period the Participant, if requested by GTS, shall also submit to GTS an affidavit stating that, to the best of its knowledge, all Protected Materials and all Notes of Protected Materials have been returned or have been destroyed or will be maintained in accordance with Paragraph 6. To the extent Protected Materials are not returned or destroyed, they shall remain subject to the Protective Agreement.

6. All Protected Materials shall be maintained by the Participant in a secure place. Access to those materials shall be limited to those Reviewing Representatives specifically authorized pursuant to Paragraphs 8-9. For documents submitted to Commission Staff (“Staff”), Staff shall

follow the notification procedures of 18 C.F.R. § 388.112 before making public any Protected Materials.

7. Protected Materials shall be treated as confidential by the Participant and by its Reviewing Representative(s) in accordance with the certificate executed pursuant to Paragraph 9. Protected Materials shall not be used by the Participant and by its Reviewing Representatives except as necessary for the conduct of this Proceeding, nor shall they be disclosed in any manner to any person except a Reviewing Representative who is engaged in the conduct of this Proceeding and who needs to know the information in order to carry out that person's responsibilities in this Proceeding. Reviewing Representatives may make copies of Protected Materials, but such copies shall become Protected Materials. Reviewing Representatives may make Notes of Protected Materials, which shall be treated as Notes of Protected Materials if they disclose or reflect the contents of Protected Materials.

8. (a) A Reviewing Representative may use Protected Materials only for purposes of its participation in this proceeding, and may not use information contained in any Protected Materials obtained through this proceeding to give Participant, Participant's affiliates, any customer or potential customer of GTS, or any competitor of GTS a commercial advantage.

(b) Subject to Paragraph 23 regarding Protected Materials marked as Not Available to Competitive Duty Personnel, in the event that Participant wishes to designate as a Reviewing Representative a person not described in Paragraph 3(c) above, the Participant shall seek agreement from GTS. If an agreement is reached that person shall be a Reviewing Representative pursuant to Paragraph 3(c) above with respect to those materials. If no agreement is reached, the Participant shall submit the disputed designation to the Commission or Presiding Judge, if any, for resolution.

9. (a) A Reviewing Representative shall not be permitted to inspect, participate in discussions regarding, or otherwise be permitted access to Protected Materials pursuant to this Protective Agreement unless that Reviewing Representative has first executed the appropriate attached Non-Disclosure Certificate, provided that, if an attorney qualified as a Reviewing Representative has executed such a certificate, the paralegals, secretarial and clerical personnel under the attorney's instruction, supervision, or control need not do so. A copy of each Non-Disclosure Certificate shall be provided to counsel for GTS prior to disclosure of any Protected Material to that Reviewing Representative.

(b) Attorneys qualified as Reviewing Representatives are responsible for ensuring that persons under their supervision or control comply with this agreement.

10. Subject to Paragraph 4 above and to the provisions of Paragraph 23 regarding access to Protected Materials that are designated Not Available to Competitive Duty Personnel, any Reviewing Representative may disclose Protected Materials to any other Reviewing Representative as long as the disclosing Reviewing Representative and the receiving Reviewing Representative both have executed a Non-Disclosure Certificate, provided that a Reviewing Representative who has executed the "Non-Disclosure Certificate of Protected Materials Including Protected Materials Marked as Not Available to Competitive Duty Personnel" shall not disclose

Protected Materials marked as Not Available to Competitive Duty Personnel to a Reviewing Representative who executed the “Non-Disclosure Certificate of Protected Materials Excluding Protected Materials Marked as Not Available to Competitive Duty Personnel.” In the event that any Reviewing Representative to whom the Protected Materials are disclosed ceases to be engaged in this Proceeding, or is employed or retained for a position whose occupant is not qualified to be a Reviewing Representative under Paragraph 3(c), access to Protected Materials by that person shall be terminated. Even if no longer engaged in this Proceeding, every person who has executed a Non-Disclosure Certificate shall continue to be bound by the provisions of this Protective Agreement and the certification for as long as the Protective Agreement is in effect.

11. Subject to Paragraph 18, the Commission or the Presiding Judge, if any, shall resolve any disputes arising under this Protective Agreement. Prior to presenting any dispute under this Protective Agreement to the Commission or the Presiding Judge, if any, the Parties shall use their best efforts to resolve it. If Participant contests the designation of materials as protected, Participant shall notify GTS in writing, specifying which Protected Materials are contested by the Participant.

12. All Protected Materials and all documents reflecting Protected Materials, including the portion of any application, contract, pleading, exhibits, transcripts, briefs and other documents which contain or refer to Protected Materials, to the extent they will be filed with the Commission, shall be filed either (i) by hand in sealed envelopes or other appropriate containers endorsed to the effect that they are sealed pursuant to this Protective Agreement; or (ii) electronically on the Commission’s website in accordance with the procedures for electronic filing of privileged material or CEII. Such documents shall be physically marked on each page as “CONTAINS PRIVILEGED INFORMATION - DO NOT RELEASE” or “CONTAINS PRIVILEGED INFORMATION AND NOT AVAILABLE TO COMPETITIVE DUTY PERSONNEL - DO NOT RELEASE,” or if the Protected Materials contain CEII, the Participant producing such information shall additionally mark on each page containing such information the words “CONTAINS CRITICAL ENERGY INFRASTRUCTURE INFORMATION - DO NOT RELEASE.” For anything filed under seal, redacted versions or, where an entire document is protected, a letter indicating such, will also be filed with the Commission and served on all parties on the service list. Participant shall take all reasonable precautions necessary to assure that Protected Materials are not distributed to unauthorized persons.

13. If the Participant desires to include, utilize or refer to any Protected Materials or information derived therefrom in any submission during this Proceeding in such a manner that might require disclosure of such material to persons other than Reviewing Representatives, the Participant shall first notify both counsel for GTS and the Commission or Presiding Judge, if any, of such desire, identifying with particularity each of the Protected Materials. Thereafter, use of such Protected Materials will be governed by procedures determined by the Commission or the Presiding Judge, if any. Protected Materials or any information derived therefrom shall not be disclosed during a technical conference to this Proceeding without the advance written consent of GTS detailing the material and the extent to which such Protected Materials may be disclosed.

14. Nothing in this Protective Agreement shall be construed as precluding any Party from objecting to the use of Protected Materials on any legal grounds.

15. Nothing in this Protective Agreement shall preclude either Party from requesting the Commission, the Presiding Judge, if any, or any other body having appropriate authority, to find that this Protective Agreement should not apply to all or any materials previously designated as Protected Materials pursuant to this Protective Agreement.

16. The provisions of 18 C.F.R. §§ 388.112 and 388.113 shall apply to any requests under the Freedom of Information Act. (5 U.S.C. § 552) for Protected Materials in the files of the Commission.

17. If the Commission or the Presiding Judge, if any, finds at any time in the course of this Proceeding that all or part of the Protected Materials need not be protected, those materials shall, nevertheless, be subject to the protection afforded by this Protective Agreement until the date the Commission or the Presiding Judge, if any, orders the materials be produced. GTS reserves the right to seek additional administrative or judicial remedies after the Commission's or the Presiding Judge's decision respecting Protected Materials or Reviewing Representatives, or the Commission's or Presiding Judge's denial of any appeal thereof.

18. Nothing in this Protective Agreement shall be deemed to preclude the Participant from independently seeking through discovery in any other administrative or judicial proceeding information or materials produced in this Proceeding under this Protective Agreement.

19. GTS reserves the right to pursue any other legal or equitable remedies that may be available in the event of actual or anticipated disclosure of Protected Materials.

20. The contents of Protected Materials or any other form of information that copies or discloses Protected Materials shall not be disclosed to anyone other than in accordance with this Protective Agreement and shall be used only in connection with this Proceeding. Any violation of this Protective Agreement and of any Non-Disclosure Certificate executed hereunder shall constitute a breach of the Protective Agreement.

21. The inadvertent disclosure of Protected Materials shall not constitute a waiver of their protected status.

22. GTS shall physically mark the words "Not Available to Competitive Duty Personnel" on any Protected Materials that GTS believes in good faith would, if disclosed to Reviewing Representatives without added precautions beyond Paragraphs 1-21 of this Protective Agreement, subject GTS, or a third party, to undue risk of competitive disadvantage or business injury. Such information may include, but is not limited to (a) non-public business development, acquisition, marketing, or facilities design and operating data, plans or activities, (b) non-public strategic business or financial plans or activities, or (c) negotiations of services, prices and rates, the public disclosure of which GTS in good faith believes would competitively harm GTS or a third party (hereafter, "Market Sensitive Information"). Market Sensitive Information should customarily be treated by GTS as sensitive or proprietary and not be available to the public. Any challenge to such a designation may be made as provided in this Protective Agreement for challenges to designations of Protected Materials.

23. (a) With respect to Protected Materials that have been marked “Not Available to Competitive Duty Personnel” and information derived therefrom, a Reviewing Representative may not be any employee or agent of Participant whose duties may include (1) the marketing, sale, or purchase of natural gas or natural gas transportation, storage, gathering, or processing services; (2) management responsibility regarding, or the supervision of any employee whose duties may include, the marketing, sale, or purchase of natural gas or natural gas transportation, storage, gathering, or processing services; (3) the provision of consulting services regarding the marketing, sale, or purchase of natural gas or natural gas transportation, storage, gathering, or processing services for a pipeline, storage, gathering, or processing facility; or (4) management responsibility regarding other strategic business activities in which use of Market Sensitive Information could be reasonably expected to cause competitive harm to GTS or a third party (collectively, “Competitive Duty Personnel”).

(b) Notwithstanding the above, in-house and/or outside counsel for Participant may serve as a Reviewing Representative; provided, however, that in-house and/or outside counsel shall not disclose any Market Sensitive Information to Competitive Duty Personnel. In the event that (a) any person who has been a Reviewing Representative subsequently is assigned to perform any Competitive Duty Personnel functions, or (b) previously available Protected Materials are changed to “Not Available to Competitive Duty Personnel,” a Reviewing Representative who performs any Competitive Duty Personnel functions shall have no access to GTS’s Protected Materials that are marked “Not Available to Competitive Duty Personnel” or information derived therefrom. Such Reviewing Representative shall immediately dispose of GTS’s Protected Materials in his/her possession that are marked “Not Available to Competitive Duty Personnel” and information derived therefrom and shall continue to comply with the requirements of the Non-Disclosure Certificate of Protected Materials Including Protected Materials Marked as Not Available to Competitive Duty Personnel and this Protective Agreement with respect to any Protected Materials to which such Reviewing Representative previously had access.

(c) Notwithstanding the foregoing, with respect to Protected Materials that have been marked “Not Available to Competitive Duty Personnel” and information derived therefrom, a Reviewing Representative may not be an employee of a FERC-regulated natural gas pipeline or storage facility or a non-regulated gathering or processing facility in the region in which GTS operates. Reviewing Representatives of such a facility, with respect to Protected Materials that have been marked “Not Available to Competitive Duty Personnel,” shall be limited to outside counsel and/or consultants, provided such individuals are not engaged as Competitive Duty Personnel, as defined above, on behalf of such facility.

(d) Notwithstanding the foregoing, a person who otherwise would be disqualified as Competitive Duty Personnel may serve as a Reviewing Representative upon agreement with GTS or, in the absence of such agreement, upon entry of an order of the Commission or the Presiding Judge, if any, authorizing such person to serve as a Reviewing Representative. Any request for an agreement or order under the preceding sentence shall be subject to the following conditions: (i) Participant must certify in writing to GTS that Participant’s ability to participate effectively in this Proceeding would be prejudiced if it was unable to rely on the assistance of the particular Reviewing Representative; (ii) Participant must identify by name and job title the particular

Reviewing Representative required and must describe the person's duties and responsibilities; (iii) the Participant claiming such prejudice must acknowledge in writing to GTS that access to the Protected Materials which are marked as Not Available to Competitive Duty Personnel shall be restricted only to such access necessary for the adjudication of this Proceeding, absent prior written consent of the GTS or authorization of the Commission or the Presiding Judge, if any, with opportunity for GTS to seek review of such decision as provided in this order; (iv) Participant must acknowledge in writing that any other use of Protected Materials which are Not Available to Competitive Duty Personnel shall constitute a violation of this Protective Agreement; and (v) prior to having access to any Protected Materials which are marked as Not Available to Competitive Duty Personnel, the Competitive Duty Personnel who is authorized to act as a Reviewing Representative must execute and deliver to GTS a Non-Disclosure Certificate Concerning Protected Material Including Protected Material Marked As Not Available to Competitive Duty Personnel acknowledging his or her familiarity with the contents of this Protective Agreement and the particular restrictions set forth in this paragraph regarding such Protected Materials. Such agreement by GTS shall not be unreasonably withheld, delayed, or conditioned. Provided that Protected Materials are correctly labeled, compliance with this Protective Agreement shall be the responsibility of the receiving Participant. Materials marked as "Not Available to Competitive Duty Personnel" shall be returned or destroyed at the conclusion of this Proceeding as otherwise provided in this Protective Agreement.

24. If GTS believes that Protected Materials that it previously disclosed to Reviewing Representative(s) contain Market Sensitive Information, public disclosure of which would competitively harm GTS, and should be treated as if such Protected Materials had been labeled "Not Available to Competitive Duty Personnel," GTS must notify Participant. Such notice must specifically identify the Protected Materials that contain such Market Sensitive Information, make an informal showing of why such information should be subject to the restrictions applicable to Protected Materials labeled "Not Available to Competitive Duty Personnel," and must seek Participant's consent to treatment of the subject materials as "Not Available to Competitive Duty Personnel." Such consent shall not be unreasonably withheld, delayed, or conditioned. If no agreement is reached concerning the designation of previously distributed Protected Material as "Not Available to Competitive Duty Personnel," GTS may submit the dispute to the Commission or the Presiding Judge. If any. In the event that GTS' previously distributed Protected Material is subsequently designated as "Not Available to Competitive Duty Personnel," it will be the responsibility of Participant to ensure compliance with this Protective Agreement after the additional designation; GTS will not be responsible for redistributing or re-labeling the affected Protected Materials.

25. If Participant is required by process of law to disclose the contents of Protected Materials, Participant agrees to timely notify GTS of any such request prior to making any disclosure, and to take all reasonable steps to ensure that such information or materials will be accorded confidential treatment, in accordance with this Protective Agreement, FERC's procedures set forth at 18 C.F.R. §§ 385.112 and 385.113, as well as in FERC's policies set forth by various FERC orders. Further, Participant agrees to limit disclosures only to information that is necessary to be responsive to any such request.

26. All notices concerning this Protective Agreement, other than the day-to-day communications between the Parties, shall be in writing and shall be sent to the relevant address set forth below. The Parties may designate other addressees or addresses by notice to the other Party. A notice shall be deemed effective (a) when given by hand delivery; (b) three days after deposit into the U.S. mail, postage prepaid; or (c) one business day after deposit with commercial overnight delivery service, charges prepaid.

Amy Johnson
Director of Regulatory
Golden Triangle Storage, LLC
919 Milam Street, Suite 2425
Houston, Texas 77002
Tel: (832) 753- 4803
ajohnson@calichestorage.com

[PARTICIPANT ADDRESS]

{Signature Page Follows}

INTENDING TO BE LEGALLY BOUND, the Parties enter into this Protective Agreement as of the date first written above.

Golden Triangle Storage, LLC

[PARTICIPANT]

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Golden Triangle Storage, LLC

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Docket No. CP23-____-000

**NON-DISCLOSURE CERTIFICATE OF PROTECTED MATERIALS
EXCLUDING PROTECTED MATERIALS MARKED AS
NOT AVAILABLE TO COMPETITIVE DUTY PERSONNEL**

I hereby certify my understanding that access to Protected Materials is provided to me pursuant to the terms and restrictions of the Protective Agreement in this proceeding, that I have been given a copy of and have read the Protective Agreement, and that I agree to be bound by it. I understand that the contents of the Protected Materials, any notes or other memoranda, or any other form of information that copies or discloses Protected Materials shall not be disclosed to anyone other than in accordance with the Protective Agreement. I acknowledge that a violation of this certificate constitutes a breach of the Protective Agreement.

By: _____
Printed Name: _____
Title: _____
Representing: _____
Date: _____

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Golden Triangle Storage, LLC) Docket No. CP23-____-000

**NON-DISCLOSURE CERTIFICATE OF PROTECTED MATERIALS
INCLUDING PROTECTED MATERIALS MARKED AS
NOT AVAILABLE TO COMPETITIVE DUTY PERSONNEL**

I hereby certify my understanding that access to Protected Materials is provided to me pursuant to the terms and restrictions of the Protective Agreement in this proceeding, that I have been given a copy of and have read the Protective Agreement, and that I agree to be bound by it. I further certify that I do not perform any “Competitive Duty Personnel” functions, as described in Paragraph 23 of the Protective Agreement. I understand that the contents of the Protected Materials, including Protected Materials marked as “Not Available to Competitive Duty Personnel,” any notes or other memoranda, or any other form of information that copies or discloses Protected Materials shall not be disclosed to anyone other than in accordance with that Protective Agreement. I acknowledge that a violation of this certificate constitutes a breach of the Protective Agreement.

By: _____
Printed Name: _____
Title: _____
Representing: _____
Date: _____

Golden Triangle Storage, LLC

)

Docket No. CP23-__-000

Exhibit Z-2 – Open Season Notice



919 Milam
Suite 2425
Houston, Texas 77002
T 832.500.7590

May 16, 2023

NOTICE OF NON-BINDING OPEN SEASON FOR GOLDEN TRIANGLE STORAGE EXPANSION PROJECT – FIRM NATURAL GAS STORAGE SERVICE

OVERVIEW

Golden Triangle Storage, LLC (“GTS”), a FERC regulated, interstate natural gas storage facility located in Beaumont, TX, is soliciting non-binding bids for Firm Storage Service (or “FSS”) in support of the development of two additional natural gas storage caverns at the existing GTS storage facility (the “Expansion Project”). Firm Storage Service made available through this Open Season is expected to support commencement of gas injections into storage in April 2026 (Cavern #3) and April 2027 (Cavern #4). The targeted injection commencement dates are estimated and may change, dependent upon, among other things, the timing of receipt of necessary regulatory approvals for the Expansion Project.

OPEN SEASON DESCRIPTION

GTS is soliciting non-binding bids for up to 14 Bcf (8 Bcf in Cavern #3 and 6 Bcf in Cavern #4) of firm storage capacity on a multi-year basis. GTS will evaluate bids for between 0.5 Bcf and a full cavern of capacity. Injection and withdrawal rights will be limited to 600 MMcf/d per expansion cavern, totaling 1.2 Bcf/d for both expansion caverns. Bids for capacity must be for a minimum of a 5-year term, with GTS ascribing greater value to longer terms (up to 20 years). Firm Storage Service will be provided under the FSS Rate Schedule in the GTS Tariff. All firm storage capacity is expected to utilize Option 2 in the FSS Form of Service Agreement in the GTS FERC Gas Tariff (“Ratchets”). A copy of the existing Tariff can be found at the link below. The Tariff may be amended from time to time, and executed FSS agreements will be governed by Tariff parameters in effect at the time of execution.

<http://www.gasnom.com/ip/goldentriangle>

Any existing GTS customers interested in relinquishing firm storage capacity they currently hold under one or more FSS SAgreements should submit a request to turn back all or a portion of such capacity by the end of the Open Season, as specified below. Such request should include the proposed effective date of the capacity turnback and the proposed quantity of capacity to be turned back.

This Open Season begins at 9:00 AM Central Time on Tuesday, May 16th, 2023, and all bids for available firm capacity must be submitted to GTS by 11:59 AM Central Time on Friday, June 16th, 2023 (the “Bid Period”). GTS will not award any capacity pursuant to this Open Season until after the end of the Open Season. All bids submitted during the Bid Period will be treated as being received at the same time.

Prospective bidders may contact Sam Wallace at swallace@calichestorage.com or Jason Evans at jevans@calichestorage.com with any questions regarding the Open Season and to submit non-binding bids for storage capacity using the Bid Forms attached. These Bid Forms can also be found on the GTS Information Posting Website under the Notices section.

BID PROCESS AND EVALUATION

GTS reserves the right, upon notice and in its sole discretion, to reject any and all bids for capacity offered during this Open Season. Without limiting the foregoing, GTS may, but is not required to, reject any bid for capacity in which the Bid Form is incomplete, is inconsistent with the terms and conditions outlined in this Open Season notice, contains additional or modified terms, or is otherwise deficient in any respect. GTS also reserves the right to reject bids for capacity in the event requesting parties are unable to meet applicable creditworthiness requirements. Bidders who submit bids do so without recourse against GTS and its parent Caliche Development Partners II, LLC.

Upon completion of the Open Season, GTS will determine the order of priority among bids based on the economic value of each bid to GTS, with the bids producing the greatest economic value having the highest priority. GTS will move forward with the highest priority bids to negotiate binding precedent agreements for service under the FSS Rate Schedule for the Expansion Project.

GTS reserves the right to extend, modify, cancel or terminate this Open Season, or waive any provision of the open season, at any time by notice.

This solicitation for bids is not an offer to sell capacity. GTS shall not be deemed to have accepted any bid or entered into any contract or agreement until the parties have negotiated mutually acceptable terms and conditions of service and have executed binding, definitive Precedent Agreements for the capacity. Bids will be treated as confidential and will not be disclosed, except as authorized by the bidder or required by applicable law or regulation.

Bid Form 1 (Cavern #3 – April 2026 In-service)

1. Contracting Entity Name: _____
2. Submitted By: _____
3. Phone: _____
4. Email: _____
5. Maximum Storage Quantity – MSQ (Dth*): _____
6. Maximum Daily Injection Quantity – MDIQ (Dth*): _____
7. Maximum Daily Withdrawal Quantity – MDWQ (Dth*): _____
8. Term (Years): _____
9. Storage Reservation Charge (\$/Dth/Month): _____
10. Fuel Reimbursement: 1.5% on Injected Volumes
11. Receipt & Delivery Quantities - Proposed Interconnects

** For pricing purposes, assume 1 MCF = 1 Dth = 1 MMBTU*

	Pipeline Name	Proposed Increase to Receipt (Dth/d)	Proposed Increase to Delivery (Dth/d)	Customer Desired Receipt Quantity (Dth/d)	Customer Desired Delivery Quantity (Dth/d)	Primary Receipt (Y/N)	Primary Delivery (Y/N)
1	Texas Eastern Transmission (TETCO)	300	300				
2	Houston Pipe Line Company (HPL)	300	300				
3	Florida Gas Transmission (FGT)	300	300				
4	Kinder Morgan Texas Pipeline	100	100				
5	Centana	0	0				
6	Whitewater - Blackfin	600	250				
7	Venture Global – CP Express	600	250				
8	Sempra - PAPTC	600	250				
9	Targa - Apex Pipeline LLC a Texas intrastate	400	150				

	Pipeline Name	Proposed Increase to Receipt (Dth/d)	Proposed Increase to Delivery (Dth/d)	Customer Desired Receipt Quantity (Dth/d)	Customer Desired Delivery Quantity (Dth/d)	Primary Receipt (Y/N)	Primary Delivery (Y/N)
10	Momentum/Midcoast - Clarity	250	200				
11	XOM Beaumont Refinery	0	200				

Signature: _____

Date: _____

Please email completed form to Sam Wallace at swallace@calichestorage.com and Jason Evans at jevans@calichestorage.com.

Bid Form 2 (Cavern #4 – April 2027 In-service)

- 12. Contracting Entity Name: _____
- 13. Submitted By: _____
- 14. Phone: _____
- 15. Email: _____
- 16. Maximum Storage Quantity – MSQ (Dth*): _____
- 17. Maximum Daily Injection Quantity – MDIQ (Dth*): _____
- 18. Maximum Daily Withdrawal Quantity – MDWQ (Dth*): _____
- 19. Term (Years): _____
- 20. Storage Reservation Charge (\$/Dth/Month): _____
- 21. Fuel Reimbursement: 1.5% on Injected Volumes
- 22. Receipt & Delivery Quantities - Proposed Interconnects

** For pricing purposes, assume 1 MCF = 1 Dth = 1 MMBTU*

	Pipeline Name	Proposed Increase to Receipt (Dth/d)	Proposed Increase to Delivery (Dth/d)	Customer Desired Receipt Quantity (Dth/d)	Customer Desired Delivery Quantity (Dth/d)	Primary Receipt (Y/N)	Primary Delivery (Y/N)
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11	XOM Beaumont Refinery	0	200				

Signature: _____

Date: _____

Please email completed form to Sam Wallace at swallace@calichestorage.com and Jason Evans at jevans@calichestorage.com.

File [Volume I - Exhibit F-I - Public.pdf] cannot be converted to PDF. (To download this file in its original format, please use the filename hyperlink from your search results. If you continue to experience difficulties, or to obtain a PDF generated version of files, please contact the helpdesk at ferconlinesupport@ferc.gov, or, call 866-208-3676 from 9AM to 5PM EST, weekdays. Please allow at least 48 hours for your helpdesk request to be processed.)

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