

188 FERC ¶ 61,052
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Willie L. Phillips, Chairman;
Mark C. Christie, and David Rosner.

Golden Triangle Storage, LLC

Docket No. CP23-542-000

ORDER ISSUING CERTIFICATE

(Issued July 23, 2024)

1. On September 12, 2023, Golden Triangle Storage, LLC (Golden Triangle) filed an application pursuant to section 7(c) of the Natural Gas Act (NGA)¹ and Part 157 of the Commission's regulations,² requesting a certificate of public convenience and necessity authorizing Golden Triangle to expand its existing natural gas storage facility in Jefferson County, Texas (Expansion Project) and reaffirmation of its market-based rate authorization to reflect the additional storage capacity and deliverability made available through the Expansion Project. Golden Triangle requests authorization for 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. For the reasons discussed below, the Commission grants the requested authorization, as described herein.

I. Background

2. Golden Triangle, a Delaware limited liability company,³ is a "natural gas company" as defined by section 2(6) of the NGA.⁴ It provides gas storage, hub, and wheeling services in interstate commerce at market-based rates.⁵

¹ 15 U.S.C. § 717f(c).

² 18 C.F.R. pt. 157 (2023).

³ Golden Triangle is wholly owned by Caliche Development Partners II, LLC, which is 99% owned by Orion Infrastructure Capital and 1% owned by Caliche Management II, LLC.

⁴ 15 U.S.C. § 717a(6).

⁵ Golden Triangle Application at 6.

3. In 2007, the Commission authorized Golden Triangle to construct and operate natural gas storage facilities in Jefferson and Orange Counties, Texas (Existing Storage Facilities).⁶ The 2007 Order authorized Golden Triangle to: (1) construct and operate two high-deliverability underground salt dome storage caverns (Cavern 1 and Cavern 2) and appurtenant facilities; and (2) provide firm and interruptible storage and hub services under market-based rates.⁷ The Existing Storage Facilities had an authorized injection capability of 300 million cubic feet (MMcf) per day, withdrawal capability of 600 MMcf per day, and a total certified capacity of 24.48 billion cubic feet (Bcf), consisting of 16 Bcf of working gas and 8.48 Bcf of cushion gas. These facilities are located on a 90-acre site (Central Storage Site) that Golden Triangle controls through a long-term lease.

4. In 2012, the Commission authorized Golden Triangle to construct and operate two additional natural gas storage caverns (Cavern 3 and Cavern 4) and other related facilities (2012 Project).⁸ The Commission also granted Golden Triangle authorization to provide firm and interruptible storage and hub services under market-based rates through these caverns.⁹ Golden Triangle failed to make any progress constructing the 2012 Project and its certificate of public convenience and necessity for the project expired on December 31, 2017.¹⁰ Golden Triangle states that the 2012 Project was not built because it never entered into long-term precedent agreements supporting the development of the project.¹¹

⁶ *Golden Triangle Storage, Inc.*, 121 FERC ¶ 61,313 (2007) (2007 Certificate Order), *amended in part*, 132 FERC ¶ 61,101 (2010), *order granting reh'g*, 134 FERC ¶ 61,036 (2011).

⁷ 2007 Certificate Order, 121 FERC ¶ 61,313 at PP 2, 4, 33.

⁸ *Golden Triangle Storage, Inc.*, 138 FERC ¶ 61,036 (2012) (2012 Certificate Order).

⁹ *Id.* PP 21–22 (finding Golden Triangle lacked market power in the relevant market area).

¹⁰ Golden Triangle requested an extension of time to complete the 2012 Project twice. The Commission granted the first request and denied the second. *Golden Triangle Storage, Inc.*, Docket No. CP11-531-000, at 2 (Dec. 18, 2014) (delegated order) (granting an extension); *Golden Triangle Storage, Inc.*, Docket No. CP11-531-000, at 2 (Dec. 20, 2017) (delegated order) (denying Golden Triangle's request for a second extension).

¹¹ Golden Triangle Application at 7.

5. On July 14, 2023, Golden Triangle requested that the Commission amend the 2007 Order to permit Golden Triangle to increase its maximum injection rate to 765 MMcf per day and its maximum withdrawal rate to 680 MMcf per day.¹² Golden Triangle also requested that the Commission reaffirm its market-based rate authority given these proposed increases. The Commission granted these requests on January 18, 2024.¹³

A. Proposal

1. Facilities

6. Golden Triangle proposes to construct and operate: (1) two new salt dome natural gas storage caverns (Cavern 3 and Cavern 4); (2) well pad sites for those caverns; (3) appurtenant facilities; (4) six 5,500 horsepower (HP) reciprocating compressor units and related equipment at the existing Central Compressor Station;¹⁴ (5) a new brine disposal well and brine disposal pipeline; and (6) new service corridors and permanent access roads.¹⁵ With the exception of the brine disposal well and related facilities,¹⁶ the Expansion Project would be within the same site as the Existing Storage Facilities.¹⁷

7. The Expansion Project would add approximately 14.4 Bcf of working gas capacity and 5.28 Bcf of base gas capacity to the Existing Storage Facilities and would allow for an incremental increase of 442 MMcf per day of injection capability and 860 MMcf per

¹² *Id.* at 10.

¹³ *Golden Triangle Storage, LLC*, 186 FERC ¶ 61,037 (2024).

¹⁴ The six units add 33,000 HP to the existing Central Compressor Station located at the Central Storage Site, resulting in 47,205 HP overall. Golden Triangle Jan. 26, 2024 Response to Jan. 18 Data Request (discussing the proposed compressor units); Golden Triangle Application at 4 (reporting the total power of the existing Central Compressor Station to be 14,205 HP).

¹⁵ Golden Triangle Application at 2. The Expansion Project is similar to the never-built 2012 Project. It is located on roughly the same parcel of land and involves the development of the same caverns. 2012 Certificate Order, 138 FERC ¶ 61,036.

¹⁶ The brine disposal facilities would be located approximately two miles off the Central Storage Site on property Golden Triangle leases for brine disposal. Golden Triangle Application at 7–8.

¹⁷ *Id.* at 2.

day of withdrawal capability at the Central Storage Site.¹⁸ Once operational, Cavern 3 would have a working gas capacity of 8.2 Bcf and Cavern 4 would have a working gas capacity of 6.2 Bcf.¹⁹ Golden Triangle expects to place Caverns 3 and 4 in service in April 2026 and April 2027, respectively.²⁰

2. Reaffirmation of Market-Based Rate Authority

8. Golden Triangle requests reaffirmation of its authority to charge market-based rates for its proposed storage and hub services. Golden Triangle included a market power study in its application that concluded that Golden Triangle could not exercise market power if granted the continued authority to charge market-based rates.

3. Requests for Waivers of Filing, Reporting, and Accounting Requirements

9. In the 2007 Order the Commission waived certain regulations ordinarily only applicable to projects charging cost-based rates. Golden Triangle requests continuation of these waivers for the Expansion Project.²¹

II. Notice, Interventions, and Comments

10. Notice of Golden Triangle's application was published in the *Federal Register* on September 27, 2023, with comments, interventions, and protests due on October 11,

¹⁸ *Id.* at 7 (reporting working gas capacity and increases in injection and withdrawal capabilities). *Id.* Ex. F-I, at tbl. 1.1-1 (reporting base gas capacity).

¹⁹ *Id.* at 8.

²⁰ *Id.* Ex. Z-2, at 1.

²¹ See Golden Triangle Application at 30–31 (citing 2012 Order, 138 FERC ¶ 61,036 at P 23; *BGS Kimball Gas Storage, LLC*, 117 FERC ¶ 61,122, at P 49 (2006)). Specifically, Golden Triangle requests that the Commission continue to waive certain sections of the Commission regulations: (1) section 157.6(b)(8) (submission of cost and revenue data); (2) section 157.20(c)(3) (postconstruction cost data); (3) sections 157.14(a)(13), (14), (16), and (17) (exhibits relevant to cost-based rates); (4) 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); (5) section 260.300 (quarterly financial reporting); (6) sections 284.10, 284.7(d), and 284.7(e) (segmentation and straight fixed-variable rate design methodology); and (7) section 157.14(a)(11) (total gas supply data).

2023.²² Golden Pass Pipeline LLC, Golden Pass LNG Terminal LLC, Center for LNG, and Natural Gas Supply Association filed timely, unopposed motions to intervene.²³

III. Discussion

11. Because the proposed facilities will provide natural gas storage service in interstate commerce subject to the Commission's jurisdiction, the proposal is subject to the requirements of subsections (c) and (e) of Section 7 of the NGA.²⁴

A. Certificate Policy Statement

12. The Certificate Policy Statement provides guidance for evaluating proposals to certificate new construction.²⁵ The Certificate Policy Statement establishes criteria for determining whether there is a need for a proposed project and whether the proposed project will serve the public interest. It explains that, in deciding whether to authorize the construction of major new natural gas facilities, the Commission balances the public benefits against the potential adverse consequences. The Commission's goal is to appropriately consider the enhancement of competitive transportation alternatives, the possibility of overbuilding, subsidization by existing customers, the applicant's responsibility for unsubscribed capacity, the avoidance of unnecessary disruptions of the environment, and the unneeded exercise of eminent domain in evaluating new pipeline construction.

13. Under this policy, the threshold requirement for pipelines proposing new projects is that the applicant must be prepared to financially support the project without relying on subsidization from its existing customers. The next step is to determine whether the applicant has made efforts to eliminate or minimize any adverse effects the project might have on the applicant's existing customers, existing pipelines in the market and their captive customers, and landowners and communities affected by the proposed project. If residual adverse effects on these interest groups are identified after efforts have been made to minimize them, the Commission will evaluate the project by balancing the evidence of public benefits to be achieved against the residual adverse effects. This is essentially an economic test. Only when the benefits outweigh the adverse effects on

²² 88 Fed. Reg. 66,442 (Sept. 27, 2023).

²³ Timely, unopposed motions to intervene are granted by operation of Rule 214 of the Commission's Rules of Practice and Procedure. 18 C.F.R. § 385.214(c).

²⁴ 15 U.S.C. § 717f(c), (e).

²⁵ *Certification of New Interstate Nat. Gas Pipeline Facilities*, 88 FERC ¶ 61,227, corrected, 89 FERC ¶ 61,040 (1999), clarified, 90 FERC ¶ 61,128, further clarified, 92 FERC ¶ 61,094 (2000).

economic interests will the Commission proceed to complete the environmental analysis where other interests are addressed.

1. No-Subsidy Requirement and Project Need

14. As discussed above, the threshold requirement for applicants proposing new projects is that the applicant must be prepared to financially support the project without relying on subsidization from its existing customers. Golden Triangle is currently providing storage, hub, and wheeling services at market-based rates. Therefore, it assumes the economic risks associated with its facilities and services to the extent that any capacity is undersubscribed or that revenues are not sufficient to recover costs. Thus, we find that Golden Triangle's proposal satisfies the threshold requirement of the Certificate Policy Statement.

15. Additionally, we find that Golden Triangle has demonstrated a need for the Expansion Project. Golden Triangle's proposed expansion is designed to meet the demand for natural gas storage in the Gulf Coast region,²⁶ and in particular to support highly variable loads such as electric generation, to satisfy market requirements during periods of peak demand and interruptions in gas production, to accommodate rapid fluctuations in demand for gas at nearby LNG terminals, and to mitigate the effects of capacity constraints.²⁷ Golden Triangle has entered into a precedent agreement with the unaffiliated ExxonMobil Oil Corporation for 87% of the project's capacity.²⁸

2. Impacts on Existing Customers, Existing Pipelines and Their Customers, and Landowners and Surrounding Communities

16. The Commission also finds that the proposed project will not adversely affect service to Golden Triangle's existing customers, or to other pipelines and their captive customers. The project is designed to provide additional incremental storage service while maintaining services for Golden Triangle's existing customers. As discussed below, the proposed project will be in a competitive market and the construction of the

²⁶ Golden Triangle Application at 1. In addition, Golden Triangle anticipates that, "[c]ontinuing 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 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." *Id.* at 20–21.

²⁷ *Id.* at 19–20.

²⁸ Golden Triangle Jan. 16, 2024 Response to Jan. 11 Information Request. Ex 1, at 2.

Expansion Project will not displace any other market-area storage capacity. The proposed project will enhance storage options available to pipelines and their customers and should increase competitive alternatives. No pipelines, storage companies, or their captive customers have protested the proposed project.

17. We are further satisfied that Golden Triangle has taken appropriate steps to minimize adverse impacts on landowners. The project is in an industrial area already used for natural gas storage.²⁹ The Expansion Project will disturb approximately 31.0 acres during construction and have a permanent impact on 5.2 acres. Of the land to be used for the Expansion Project, 25.1 acres are within the Central Storage Site, which is already disturbed and controlled by Golden Triangle under a long-term lease. Golden Triangle has leased the land off the Central Storage Site necessary for the brine disposal facilities where 5.9 acres will be disturbed during construction and 3.1 acres will be disturbed during operation.³⁰ Accordingly, no landowners will be affected by the construction and operation of the Expansion Project.

18. We find that there are demonstrated benefits of the Expansion Project, and, further, that the project will not have adverse economic impacts on existing shippers or other pipelines and their existing customers and that the project will have no adverse economic effect on landowners and surrounding communities. Therefore, we conclude that the project is consistent with the criteria set forth in the Certificate Policy Statement and analyze the environmental impacts of the project below.

B. Rates

1. Market-Based Rates

19. Golden Triangle requests that the Commission reaffirm its determination that Golden Triangle can charge market-based rates for the storage, hub, and wheeling services it provides. It asserts that the increased withdrawal and injection capability have no bearing on the Commission's previous conclusions about Golden Triangle's market share or market concentration. Golden Triangle states that the Gulf Coast Production Area market for natural gas storage services has become less concentrated³¹ since the last time the Commission considered Golden Triangle's market share and market concentration in 2018.

²⁹ Golden Triangle Application at 17.

³⁰ *Id.* at 9, 17, 21.

³¹ *Id.* Ex. I, at 18.

20. The Commission evaluates requests to charge market-based rates for storage under the analytical framework of the Alternative Rate Policy Statement.³² The Commission's main concern in approving the use of market-based rates for a service is the presence that the applicant has in the relevant marketplace. Simply put, if the applicant has market power over a service in the relevant marketplace, then the Commission will not permit it to charge market-based rates for that service.³³ The Commission will approve market-based rates for storage providers where the applicant has demonstrated it lacks market power³⁴ or has adopted conditions that significantly mitigate market power.³⁵ The Commission has approved requests to charge market-based rates for storage services based on a finding that the applicants of the proposed projects would not be able to exercise market power due to small size, anticipated share of the market, and numerous competitors.³⁶

21. Pursuant to the Alternative Rate Policy Statement, the Commission has developed a framework for evaluation of requests for market-based rates. This framework has two principal purposes: (1) to determine whether the applicant can withhold or restrict services and, as a result, increase prices by a significant amount for a significant period of time; and (2) to determine whether the applicant can discriminate unduly in price or terms

³² *Alts. to Traditional Cost-of-Serv. Ratemaking for Nat. Gas Pipelines; Regul. of Negotiated Transportation Servs. of Nat. Gas Pipelines* (Alternative Rate Policy Statement), 74 FERC ¶ 61,076, *reh'g and clarification denied*, 75 FERC ¶ 61,024 (1996), *petitions for review denied sub nom. Burlington Res. Oil & Gas Co. v. FERC*, 172 F.3d 918 (D.C. Cir. 1998); *criteria modified, Rate Regul. of Certain Nat. Gas Storage Facilities*, Order No. 678, 115 FERC ¶ 61,343, *order on clarification and reh'g*, Order No. 678-A, 117 FERC ¶ 61,190 (2006).

³³ *Golden Triangle Storage, Inc.*, 152 FERC ¶ 61,158, at P 9 (2015).

³⁴ Market power is defined as the ability to profitably maintain prices above competitive levels for a significant period. Alternative Rate Policy Statement, 74 FERC at 61,230.

³⁵ Order No. 678, 115 FERC ¶ 61,343, *order on clarification and reh'g*, Order No. 678-A, 117 FERC ¶ 61,190.

³⁶ *Egan Hub Partners, L.P.*, 99 FERC ¶ 61,269 (2002); *Egan Hub Partners, L.P.*, 95 FERC ¶ 61,395 (2001); *Moss Bluff Hub Partners, L.P.*, 80 FERC ¶ 61,181 (1997); *Egan Hub Partners, L.P.*, 77 FERC ¶ 61,016 (1996).

and conditions of service.³⁷ To find that an applicant cannot withhold or restrict services, significantly increase prices over an extended period, or discriminate unduly, the Commission must first find that there is a lack of market power because customers have good alternatives,³⁸ or that the applicant or Commission can mitigate the market power with specified conditions.

22. Consistent with the methodology provided by the Alternative Rate Policy Statement, our analysis of whether Golden Triangle can exercise market power includes three major steps. First, we will review whether Golden Triangle has specifically and fully defined the relevant markets to determine which specific products or services are identified and the suppliers of those products and services that provide good alternatives to the applicant's ability to exercise market power.³⁹ Additionally, as part of the first step, we will identify the relevant geographic market.⁴⁰ Second, we will assess Golden Triangle's market share and market concentration.⁴¹ We use market share and the Herfindahl-Hirschman Index (HHI) as screens in assessing whether a pipeline has the ability to exercise market power in defined product and geographic markets. However, HHI is just one factor we may evaluate.⁴² The Alternative Rate Policy Statement recognizes that having a large market share in a concentrated market does not constitute market power if ease of entry and other competitive factors can prevent the applicant

³⁷ See *Blue Sky Gas Storage, LLC*, 129 FERC ¶ 61,210 (2009); *Orbit Gas Storage, Inc.*, 126 FERC ¶ 61,095, at P 19 (2009).

³⁸ A "good alternative" is an alternative that is available soon enough, has a price low enough, and has a quality high enough to permit customers to substitute the alternative for an applicant's service. Alternative Rate Policy Statement, 74 FERC at 61,231.

³⁹ The relevant product market consists of the applicant's service and other services that are good alternatives to the applicant's service. *Id.*

⁴⁰ *Id.* at 61,232–34.

⁴¹ *Id.* at 61,234.

⁴² For example, the Commission has accepted an HHI of 1,800 as the threshold indicating the potential ability for an applicant to exercise market power. In cases where the HHI was higher than 1,800, the Commission has performed further review to determine whether other competitive factors nevertheless will prevent the applicant from being able to exercise market power. See, e.g., *UGI Storage Co.*, 133 FERC ¶ 61,073 (2010); *Arlington Storage Co., LLC*, 125 FERC ¶ 61,306 (2008); *Rendezvous Gas Servs., L.L.C.*, 112 FERC ¶ 61,141 (2005).

from exercising significant market power.⁴³ Third, and lastly, we will evaluate other relevant factors, such as ease of entering the market.

a. Relevant Product and Geographic Markets and Market Concentration and Market Share

23. Golden Triangle requests reaffirmation of its authority to charge market-based rates for its firm and interruptible storage, hub, and wheeling services. It states that it provided a market power study which includes an updated market power analysis demonstrating that, with the anticipated changes in working gas capacity and deliverability, Golden Triangle will be unable to exercise market power if granted the authority to continue to charge market-based rates for its firm and interruptible storage,

⁴³ In the Alternative Rate Policy Statement, the Commission stated that its consideration of a market-based rate proposal will include an examination of market concentration. Further, it explained that:

[t]o measure market concentration, one generally considers the summary measure of market concentration known as the Herfindahl-Hirschman Index (HHI). If the HHI is small then one can generally conclude that sellers cannot exercise market power in this market. A small HHI indicates that customers have sufficiently diverse sources of supply in this market that no one firm or group of firms acting together could profitably raise market price. If the HHI is higher than additional analysis may be needed to determine if the seller can exercise market power.

The Commission will analyze the HHI calculation for the relevant markets. The HHI will be evaluated for each relevant path and/or origin market and each destination market utilizing the relevant data for each mainline receipt point (origin market) and each delivery point (destination market). If an applicant wishes to argue for either a broader or narrower market definition, it should also include calculations for its market definitions. Only sales or capacity figures associated with good alternatives should be used in calculating the HHI. In addition, applicants should aggregate the capacity of affiliated companies into one estimate for those affiliates as a single seller.

Alternative Rate Policy Statement, 74 FERC at 61,234 (footnote omitted); *see also Golden Triangle*, 152 FERC ¶ 61,158 at P 11, P 11 n.10.

hub, and wheeling services (Updated Market Power Study).⁴⁴ As set forth above, in order to ascertain whether additional scrutiny is needed, the Commission examines concentration in the relevant market using the HHI. The Alternative Rate Policy Statement states that an HHI of less than 1,800 indicates that sellers cannot exert market power because customers have sufficiently diverse alternatives in the relevant market.⁴⁵

24. As discussed below, our review of Golden Triangle's Updated Market Power Study demonstrates that barriers to entry in the relevant geographic market area, the Gulf Coast Production Area,⁴⁶ where the Expansion Project is located, are still not significant and Golden Triangle will continue to lack market power. Golden Triangle also provided an Updated Bingo Card analysis⁴⁷ along with its Updated Market Power Study, and, after review of the Updated Market Power Study and Updated Bingo Card analysis, we continue to find that Golden Triangle lacks market power for its hub services.⁴⁸

25. In the 2012 Order, the Commission reviewed the 2012 Market Power Study, which utilized two measures of natural gas storage capacity to analyze market share and concentration: working gas capacity and peak day deliverability. Golden Triangle's 2012 Market Power Study showed that in the Gulf Coast Production Area, Golden

⁴⁴ Golden Triangle Application at 28–29, Ex. I.

⁴⁵ Alternative Rate Policy Statement, 74 FERC at 61,235.

⁴⁶ 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, 138 FERC ¶ 61,036; *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).

⁴⁷ The “bingo card” analysis is a matrix that identifies the alternatives to Golden Triangle that market participants have for wheeling natural gas between the pipelines directly and indirectly interconnected to Golden Triangle.

⁴⁸ Golden Triangle's Updated Market Power Study states that hub services represent substitutes for firm and interruptible storage service. Ex. I at 8 n.7. Thus, Golden Triangle relies on the market share and market concentration analyses presented to demonstrate that Golden Triangle will continue to lack market power for hub services generally.

Triangle and its affiliate, Jefferson Island Storage & Hub, L.L.C. (Jefferson Island),⁴⁹ would have a market share of approximately 5.7% of the total working gas capacity and 3.9% of available peak day deliverability. In contrast, Golden Triangle's Updated Market Power Study for the proposed expansion, which employs the same analytical method used in the 2012 Market Power Study, shows that in the Gulf Coast Production Area, Golden Triangle would have a market share of approximately 2.5% of the total working gas capacity⁵⁰ and 3.4% of available peak day deliverability.⁵¹ Further, the Updated Market Power Study shows an HHI of 1,019 for working gas capacity and 1,067 for peak day deliverability. Since these Updated Market Power Study HHIs are well below the 1,800-level cited in the Alternative Rate Policy Statement, the Commission again concludes that Golden Triangle does not have market power in the relevant market area. In the wheeling and ancillary market, the Updated Market Power Study demonstrates that following completion of the Expansion Project, Golden Triangle would have a market share of only 1.4% for receipt capacity and a market share of only 1.5% for delivery capacity. Further, the HHI levels for receipt and delivery capacity are 1,051 and 1,056 respectively, indicating that the market is unconcentrated.

b. Other Relevant Factors Mitigating Potential Market Power

26. Golden Triangle's ability to exercise market power has been significantly reduced following its purchase by Caliche Development Partners II, LLC, which does not have concurrent ownership of other storage facilities, as did the former owner Southern Company Gas.⁵² Beside the fact that 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: (1) various storage providers have entered the market and/or announced new storage projects, indicating a relative ease of entry when market conditions warrant; (2) 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; (3) there are numerous alternatives to storage available to customers (e.g., an active capacity release market on

⁴⁹ Golden Triangle and Jefferson Island were affiliates under the parent company, AGL Resources Inc. Jefferson Island is now owned by EnLink Midstream LLC and no longer an affiliate to Golden Triangle.

⁵⁰ See Ex. I at app. C.

⁵¹ *Id.*

⁵² See Golden Triangle December 1, 2022 Notice of Non-Material Change in Upstream Ownership, filed in Docket No. RP23-247-000.

the interstate pipelines, pipeline park and loan services, and seasonal/swing services provided by marketers); (4) 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 United States that previously have been granted market-based rate authority by the Commission.⁵³

c. Change in Circumstances

27. We require that Golden Triangle notify the Commission if future changes in circumstances significantly affect its present market power status, as required by the Commission's regulations.⁵⁴ Any event which would affect Golden Triangle's ability to withhold or restrict services or increase its ability to discriminate unduly in price or terms of service must be reported to the Commission within 10 days of acquiring knowledge of any such changes. Failure to timely file a change in circumstance report or failure to comply with the reporting requirements would constitute a violation of the Commission's regulations. We also reserve the right to require an updated market power analysis at any time.⁵⁵

2. Waivers of Filing, Reporting, and Accounting Requirements

28. As discussed above, Golden Triangle requests the continuation of waivers typically granted to other market-based rate storage providers. We find that the cost-related information required by the cost-of-service rate regulations is not relevant in light of our reaffirmation of market-based rates. Thus, we grant Golden Triangle's request for waiver. We clarify that these waivers do not cover the information necessary for the Commission's assessment of annual charges.⁵⁶ Golden Triangle is required to file pages 520 and 520-A of Form No. 2-A, reporting the gas volume information which is the basis for determining the annual charge. The waivers are subject to revision if the Commission finds cause to re-examine Golden Triangle's market power or market-based rates. In addition, consistent with the Uniform System of Accounts, we require Golden Triangle to maintain records to separately identify the original cost and related depreciation of its facilities should the Commission require Golden Triangle to produce those reports in the future.

⁵³ Ex. I at 9.

⁵⁴ 18 C.F.R. § 284.504(b).

⁵⁵ *Golden Triangle*, 152 FERC ¶ 61,158 at P 24.

⁵⁶ *See Wyckoff Gas Storage Co., LLC*, 105 FERC ¶ 61,027, at P 65 (2003).

C. Engineering Analysis

29. Commission staff completed an engineering review of the proposed six compressor units, the two new storage caverns, and the associated Caverns 3 and 4 pipelines. Based on this review, we find that the proposed facilities are appropriately designed to increase Golden Triangle's storage deliverability by up to 860 MMcf of natural gas per day and storage injection capability by up to 442 MMcf of natural gas per day. Upon completion of all the proposed facilities, Golden Triangle's storage facility will have a storage withdrawal rate of up to 1,540 MMcf per day and a storage injection rate of up to 1,207 MMcf per day. Staff confirmed that Cavern 3 is designed to store up to 8.2 Bcf of working gas and 3.0 Bcf of cushion gas, summing to a total storage capacity of 11.2 Bcf of natural gas. Cavern 4 is designed to store up to 6.2 Bcf of working gas and 2.28 Bcf of cushion gas, summing to a total storage capacity of 8.48 Bcf of natural gas. Table 1 below highlights the certificated storage parameters for the Central Storage Site Expansion Project as well as certain certificated storage parameters at the Existing Storage Facilities.

30. Staff's review also confirms that Golden Triangle's proposed cavern locations are within the design criteria and confinement of the salt formation. We are requiring the maximum operating stabilized bottomhole pressure for Caverns 3 and 4 to be approximately 2,820 pounds per square inch absolute (psia) and the minimum operating stabilized bottomhole pressure for Caverns 3 and 4 to be approximately 840 psia.⁵⁷ The maximum allowable pressure gradient shall be 0.85 psi/ft and the minimum allowable pressure gradient shall be 0.25 psi/ft throughout the storage cycle.

31. Because salt deforms plastically in relatively short time frames, the caverns will shrink over time. Large volume losses due to salt creep have occurred in natural gas storage caverns.⁵⁸ To mitigate these concerns, Golden Triangle shall conduct sonar surveys to monitor the caverns' size and shape to ensure that salt creep does not potentially damage the integrity of the caverns, which may result in lost gas and reductions in storage capacity. The Commission will require Golden Triangle to file an annual inventory verification study to assist in identification of potential problems with the storage facility.

⁵⁷ The maximum and minimum operating stabilized bottomhole pressures are as measured at the casing shoe.

⁵⁸ Thomas, Robert and Gehle, Richard, *A Brief History of Salt Cavern Use*, 2000 SOL. MINING RSCH. INST.

Table 1: Central Storage Site Certificated Storage Parameters

Type	Existing Facility ⁵⁹			Expansion Project			Expanded Facility Total
Caverns	1	2	Total	3	4	Total	
Total Storage Capacity (Bcf)	12.24	12.24	24.48	11.2	8.48	19.68	44.16
Working Gas (Bcf)	8.0	8.0	16.0	8.2	6.2	14.4	30.4
Cushion (Base) Gas (Bcf)	4.24	4.24	8.48	3.0	2.28	5.28	13.76
Injection Rate (MMcf/d)	765			442			1,207
Withdrawal Rate (MMcf/d)	680			860			1,540
Operating Stabilized Bottomhole Pressure (psia)				Caverns 3 and 4 ⁶⁰			
Maximum				2,820			
Minimum				840			

D. Environmental Analysis

32. On September 21, 2023, the Commission issued a Notice of Scoping Period Requesting Comments on Environmental Issues for the Proposed Golden Triangle

⁵⁹ Golden Triangle says it notified the Commission in 2022 that Cavern 1 has a cushion gas capacity of approximately 3.07 Bcf and working gas capacity of approximately 7.04 Bcf. Additionally, Golden Triangle states that 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. Golden Triangle Application at 5–6.

⁶⁰ Maximum and minimum pressure values are rounded to the nearest whole number. Golden Triangle reported its maximum pressure as 2,819.73 psia and its minimum pressure to be 839.73 psia. Golden Triangle Jan. 26, 2024 Response to Jan. 18 Data Request.

Storage Expansion Project. The notice was published in the Federal Register⁶¹ and mailed to interested parties including federal, state, and local officials; agency representatives; environmental and public interest groups; Native American Tribes; local libraries and newspapers; and affected property owners. We received comments from the Texas Parks and Wildlife Department, the Texas Commission on Environmental Quality (TCEQ), the Sierra Club, and the U.S. Environmental Protection Agency (EPA).

33. The primary issues raised by the commentors during the scoping process included construction impacts, flood risks and sea level rise, effects on threatened and endangered species, water quality, air quality, hazardous waste management, and impacts on environmental justice communities.

34. On November 7, 2023, the Commission issued a *Notice of Schedule for the Preparation of an Environmental Assessment for the Golden Triangle Storage Expansion Project*. The notice was published in the Federal Register on November 14, 2023,⁶² and mailed to project stakeholders. The Commission did not receive any comments on the notice.

35. Pursuant to the National Environmental Policy Act of 1969 (NEPA),⁶³ Commission staff prepared an Environmental Assessment (EA) for Golden Triangle's proposal, which was issued on February 1, 2024. The EA addresses geology, soils, water resources, wetlands, vegetation, fisheries, wildlife, threatened and endangered species, land use, recreation, visual resources, cultural resources, air quality, noise, safety, environmental justice,⁶⁴ cumulative impacts, and alternatives. All substantive comments raised during the scoping process were addressed in the EA.

36. The EA was issued for a 30-day comment period and placed into the public record on February 1, 2024. A Notice of Availability of the EA was published in the

⁶¹ 88 Fed. Reg. 66,439 (Sept. 27, 2023).

⁶² 88 Fed. Reg. 78,012 (Nov. 14, 2023).

⁶³ 42 U.S.C. §§ 4321 *et seq.* See also 18 C.F.R. pt. 380 (2023) (Commission's regulations implementing NEPA).

⁶⁴ Under NEPA, the Commission considers impacts to all potentially affected communities. Consistent with Executive Order 12,898, 14,008, and 14,096 the Commission separately identifies and addresses disproportionate and adverse human health or environmental effects on environmental justice communities. Exec. Order No. 12,898, 59 Fed. Reg. 7629 (Feb. 11, 1994); Exec. Order No. 14,008, 86 Fed. Reg. 7619 (Jan. 27, 2021); Exec. Order No. 14,096, 88 Fed. Reg. 25251 (Apr. 21, 2023). See *infra* PP 51–72.

*Federal Register*⁶⁵ and was mailed to interested parties including federal, state, and local officials; agency representatives; environmental and public interest groups; Native American Tribes; local libraries and newspapers; and affected property owners. Regarding climate change impacts, the EA does not characterize the Expansion Project's greenhouse gas (GHG) emissions as significant or insignificant, but we disclose the reasonably foreseeable emissions below.⁶⁶ For the remainder of resources assessed, the EA concludes that with the recommended mitigation measures, project impacts would not be significant. As further discussed below, with regard to environmental justice communities, project impacts associated with socioeconomics, traffic, visual resources, and air quality would mainly be temporary and less than significant.

37. The Commission received comments on the EA from TCEQ and EPA. The comments raised concerns regarding air quality, water contamination, hazardous waste, construction impacts, noise, restoration, and environmental justice. Golden Triangle filed a response to these comments.⁶⁷

1. Air Quality

38. TCEQ comments that the Commission should determine whether this proposed action is subject to federal general conformity requirements because TCEQ is currently assessing Jefferson County's attainment of the National Ambient Air Quality Standards (NAAQS) for ozone pursuant to *South Coast Air Quality Management District v. EPA*.⁶⁸ Under the Clean Air Act, if a federal agency's action will likely exceed emissions thresholds in nonattainment or maintenance areas, the agency must prepare a conformity analysis and mitigate project emissions to ensure its action does not impede the state's NAAQS attainment.⁶⁹ In the EA, Commission staff explained that Jefferson County is in attainment for all criteria pollutants.⁷⁰ The project's criteria pollutant emissions are also

⁶⁵ 89 Fed. Reg. 8417 (February 7, 2024).

⁶⁶ See *infra* PP 73–79; see also EA at 70 (disclosing emissions).

⁶⁷ Golden Triangle Apr. 12, 2024 Response to EA Comments. Ex. 1.

⁶⁸ 882 F.3d 1138 (D.C. Cir. 2018). In *S. Coast Air Quality Mgmt Dist. v. EPA*, the D.C. Circuit found portions of an EPA rule revoking the 1997 ozone NAAQS and implementing the 2008 ozone NAAQS violated the Clean Air Act's anti-backsliding requirements for certain nonattainment areas.

⁶⁹ *S. Coast Air Quality Mgmt. Dist. v. FERC*, 621 F.3d 1085, 1099 (9th Cir. 2010) (citing 40 C.F.R. §§ 93.150(b), 93.153(a)–(b)).

⁷⁰ EA at 48.

below the de minimis thresholds established under 40 C.F.R. § 93.153 (2023) for general conformity applicability.⁷¹ Based on the foregoing, the project is not expected to impede the state's ozone NAAQS attainment.

39. On March 6, 2024, after issuance of the EA, EPA revised NAAQS for particulate matter with an aerodynamic diameter less than 2.5 micrometers (PM_{2.5}), lowering the primary annual standard from 12.0 micrograms per cubic meter (µg/m³) to 9.0 µg/m³. The revised NAAQS became effective May 6, 2024.⁷²

40. As described in the EA, Golden Triangle's modeling estimated the total predicted concentration for the annual PM_{2.5} NAAQS to be 11.3 µg/m³.⁷³ To determine whether the operations of the Expansion Project would result in PM_{2.5} air quality impacts greater than the revised annual PM_{2.5} NAAQS in the surrounding communities, Commission staff issued Environmental Information Requests (EIRs) to Golden Triangle on May 16 and June 13, 2024 requesting revised air quality analysis.⁷⁴

41. On June 20, 2024, Golden Triangle submitted a revised air quality modeling analysis to demonstrate that the Expansion Project and the whole facility (i.e., the Expansion Project plus the Existing Storage Facilities) would not cause the revised annual PM_{2.5} NAAQS to be exceeded in the project area. The results also indicated that the Expansion Project sources, modeled separately, would not exceed the EPA's significant impact level (SIL)⁷⁵ for annual or 24-hour PM_{2.5}, and thus the TCEQ would not require any additional modeling for comparison to the NAAQS or cumulative modeling.⁷⁶ To ensure that the cumulative impacts of the Expansion Project as well as

⁷¹ Compare 40 C.F.R. § 93.153 with EA at 54–55.

⁷² 89 Fed. Reg. 16,202 (Mar. 6, 2024).

⁷³ EA at tbl. 13. The modeling results in the final row of Table 13 are incorrectly classified as annual PM₁₀ emissions. They should be classified as annual PM_{2.5} emissions.

⁷⁴ May 16, 2024 EIR at 3; Jun. 13, 2024 EIR at 3.

⁷⁵ See EPA, *Supplement to the Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program* at 6–7 (Apr. 30, 2024), <https://www.epa.gov/system/files/documents/2024-04/supplement-to-the-guidance-on-significant-impact-levels-for-ozone-and-fine-particles-in-the-psd-permitting-program-4-30-2024.pdf>.

⁷⁶ The Significant Impact Level for 24-hour and annual PM_{2.5} is 1.20 and 0.13 µg/m³, respectively. Golden Triangle's revised modeled concentrations for the

the Existing Storage Facilities would not cause or contribute to exceedances of the annual PM_{2.5} NAAQS, Golden Triangle performed additional air quality modeling. The air quality modeling used more representative EPA emissions factors, developed for natural gas combustion sources operating at gas facilities and used ambient air quality background data from three nearby air quality monitors in Mauriceville and Port Arthur, Texas, and Vinton, Louisiana. These three monitors were determined to be representative of the project impact area based on air stream and pollutant dispersion trends and location.⁷⁷ The revised modeling results using these local ambient air quality monitors and the more representative emission factors estimated that the maximum cumulative impacts from the Expansion Project facilities would be 8.50, 8.99, and 7.80 µg/m³, respectively, which are below the 9.0 µg/m³ annual PM_{2.5} NAAQS.⁷⁸ Accordingly, the increase in emissions from the Expansion Project facilities would not exceed the NAAQS.

42. EPA comments that all Non-Road Engines should be certified as in compliance with EPA Tier 4 regulations for new and in-use nonroad compression ignition engines found at 40 CFR Parts 89, 1039, or Category 3 regulations for new and in-use marine compression-ignition engines found at Parts 94 and 1042. Golden Triangle would comply with air quality regulations and emission standards for each piece of construction equipment, which would comply with EPA requirements, but Golden Triangle has not committed to using either Tier 4 or Category 3 engines.⁷⁹ Golden Triangle has also committed to other air quality mitigation measures including using low-sulfur diesel fuel in non-road construction equipment.⁸⁰

43. EPA further recommends requiring Golden Triangle to coordinate with TCEQ to determine air quality conditions, such as atmospheric inversions, prior to land-clearing

project's 24-hour and annual PM_{2.5} are expected to be 0.234 and 0.021 µg/m³, respectively. *See* Golden Triangle Jun. 20, 2024 Response to Jun. 13 EIR. Ex. 1, at tbl. 3.

⁷⁷ The Port Arthur Memorial School monitor (EPA Monitor ID 48-245-0021) is located approximately 12.2 miles southeast of the Expansion Project in Port Arthur, Texas; the Mauriceville monitor (EPA Monitor ID 48-361-1100) is located approximately 17.1 miles northeast of the Expansion Project in West Orange, Texas; and the Vinton monitor (EPA Monitor ID 22-019-0009) is located approximately 32.8 miles northeast of the Expansion Project in Vinton, Louisiana.

⁷⁸ Golden Triangle Jun. 20, 2024 Response. Ex. 1, at tbl. 5 (using the 2021–2023 averaging period).

⁷⁹ EA at 54; *see also* Golden Triangle Apr. 12, 2024 Response. Ex. 1, at 1.

⁸⁰ EA at 46.

that relies on open burning to dispose of woody debris. There is no open burning associated with this project and therefore the proposed coordination is unnecessary.

44. EPA comments that measures should be taken to prevent particulate matter emissions during the construction activities as planned, such as applying water to disturbed areas and unpaved roads. As stated in the EA and Golden Triangle's response to EPA's comments, Golden Triangle proposes to take such measures and would mitigate fugitive dust emissions by implementing measures included in its Fugitive Dust Control Plan, such as maintaining roadways, spraying water as needed for dust suppression on the existing access roads, limiting speed limits on unpaved roads, covering material trucks during transit, and properly maintaining equipment.⁸¹

2. Water Contamination

45. TCEQ comments that the EA should address actions to prevent surface and groundwater contamination. The EA describes the measures Golden Triangle would implement to prevent surface and groundwater contamination, including adherence to its Spill Prevention, Control, and Countermeasure Plan, its Plan for the Unanticipated Discovery of Contaminated Soils or Groundwater, and its layered well casing construction design.⁸² The EA concludes that these measures would adequately minimize the potential for contamination to affect groundwater or surface water resources.⁸³ We agree.

46. EPA recommends including the assessment unit identification of the impaired waterbodies, including mapping, within the EA so that the reader may locate the waterbody easily. As stated in the EA, the project workspaces do not cross any impaired waters and such waters are not anticipated to affect, or be affected by, the Expansion Project, so no additional information is needed.⁸⁴

3. Hazardous Waste

47. TCEQ comments that the management of industrial and hazardous waste at the site is subject to state and federal regulations and that construction and demolition waste must be sent for recycling or disposal at a facility authorized by TCEQ. As stated in the EA, Golden Triangle would adhere to all state and federal regulations during construction

⁸¹ *Id.* at 53; Golden Triangle Apr. 12, 2024 Response. Ex. 1, at 1.

⁸² EA at 16. The EA refers to the Spill Prevention, Control, and Countermeasure Plan as the Spill Prevention, Containment, and Control Plan.

⁸³ *Id.*

⁸⁴ *Id.* at 17.

and operation of the project, and would follow appropriate testing and disposal procedures, including federal regulations under the Toxic Substances Control Act and any state regulations regarding where waste must be sent for recycling or disposal.⁸⁵ Golden Triangle will also use its Spill Prevention, Control, and Countermeasure Plan to prevent and, if necessary, control inadvertent spills of hazardous materials.⁸⁶

4. Construction Impacts

48. EPA states that, because the overall earth disturbance of this project is greater than 1 acre, stormwater discharges from all construction activities are required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage. EPA also states that a stormwater pollution prevention plan meeting all permit requirements of TCEQ's Construction General Permit must be developed before construction activities or on-site or off-site construction support activities may begin and be implemented.

49. Golden Triangle is responsible for obtaining all permits and approvals required for the project, including a Construction General Permit from TCEQ, which provides NPDES permit coverage.⁸⁷ Golden Triangle anticipates approval of a Construction General Permit by May 2024 and has also proposed a Stormwater Pollution Prevention Plan, which was prepared in accordance with the Commission's *Upland Erosion Control, Revegetation, and Maintenance Plan*, the Commission's *Wetland and Waterbody Construction and Mitigation Procedures*, the NPDES General Permit for Discharges for Large and Small Construction Activity, and the NPDES National Menu of Stormwater Best Management Practices.⁸⁸

5. Revegetation

50. EPA comments that the EA does not specify what kind of seed mix would be used in revegetation efforts, and that a native seed mix appropriate for the soil type should be used. As the EA states, Golden Triangle would revegetate disturbed areas with a seed mix recommended by the local Natural Resources Conservation Service (NRCS) office.⁸⁹ As recommended by the NRCS, Golden Triangle proposes to plant an equal mixture of common Bermuda grass and Pensacola Bahia, as there is no longer a source of native

⁸⁵ *Id.* at 63.

⁸⁶ Golden Triangle Apr. 12, 2024 Response. Ex. 1, at 1.

⁸⁷ EA at 8; Ex. F-I at tbl. 1.21-1.

⁸⁸ EA at 7; Ex. F-I at tbl. 1.21-1.

⁸⁹ EA at 14.

seed with the ecotypes found in southeast Texas and the area surrounding the Expansion Project consists primarily of a mixture of annuals and introduced species.⁹⁰ In wetter upland areas, only common Bermuda grass would be used.

6. Environmental Justice

51. In conducting NEPA reviews of proposed natural gas projects, the Commission follows Executive Order 12898 and Executive Order 14096, which direct federal agencies to identify and address disproportionate and adverse human health or environmental effects of their actions on environmental justice communities.⁹¹ Executive Order 14008 also directs agencies to develop programs, policies, and activities to address the disproportionate and adverse “human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts.”⁹² Environmental justice is the “fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.”⁹³

⁹⁰ Golden Triangle Application, app. 1-F, at 5-4.

⁹¹ Exec. Order No. 12,898, 59 Fed. Reg. 7629 (Feb. 16, 1994); Exec. Order No. 14,096, 88 Fed. Reg. 25251 (Apr. 21, 2023).

⁹² Exec. Order No. 14,008, 86 Fed. Reg. 7619, at 7629 (Jan. 27, 2021). The term “environmental justice community” includes communities that have been historically marginalized and overburdened by pollution. *Id.* at 7629. The term also includes, but may not be limited to minority populations, low-income populations, or indigenous peoples. *See* EPA, EJ 2020 Glossary (Feb. 2024), <https://www.epa.gov/system/files/documents/2024-02/ej-2020-glossary.pdf>.

⁹³ *See* EPA, EJ 2020 Glossary (Feb. 2024), <https://www.epa.gov/system/files/documents/2024-02/ej-2020-glossary.pdf>. Fair treatment means that no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies. *Id.* Meaningful involvement of potentially affected environmental justice community residents means: (1) people have an appropriate opportunity to participate in decisions about a proposed activity that may affect their environment and/or health; (2) the public’s contributions can influence the regulatory agency’s decision; (3) community concerns will be considered in the decision-making process; and (4) decision makers will seek out and facilitate the involvement of those potentially affected. *Id.*

52. Consistent with the Council on Environmental Quality (CEQ)⁹⁴ and EPA⁹⁵ guidance and recommendations, the Commission's methodology for assessing environmental justice impacts considers: (1) whether environmental justice communities (e.g., minority or low-income populations)⁹⁶ exist in the project area; (2) whether impacts on environmental justice communities are disproportionate and adverse; and (3) possible mitigation measures. As recommended in *Promising Practices*, the Commission uses the 50% and the meaningfully greater analysis methods to identify minority populations.⁹⁷ Specifically, a minority population is present where either: (1) the aggregate minority population of the block groups in the affected area exceeds 50%; or (2) the aggregate minority population of the block groups affected is 10% higher than the aggregate minority population percentage in the county.⁹⁸

53. CEQ's *Environmental Justice Guidance* also directs low-income populations to be identified based on the annual statistical poverty thresholds from the U.S. Census Bureau. Using *Promising Practices*' low-income threshold criteria method, low-income populations are identified as block groups where the percent of a low-income population in the identified block group is equal to or greater than that of the county.

⁹⁴ CEQ, *Environmental Justice: Guidance Under the National Environmental Policy Act* 4 (Dec. 1997) (CEQ's *Environmental Justice Guidance*), <https://ceq.doe.gov/docs/ceq-regulations-and-guidance/regs/ej/justice.pdf>. CEQ offers recommendations on how federal agencies can provide opportunities for effective community participation in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving the accessibility of public meetings, crucial documents, and notices. See *infra* PP 58–60 (describing Golden Triangle's engagement efforts).

⁹⁵ See generally EPA, *Promising Practices for EJ Methodologies in NEPA Reviews* (Mar. 2016) (*Promising Practices*), https://www.epa.gov/sites/default/files/2016-08/documents/nepa_promising_practices_document_2016.pdf.

⁹⁶ See generally, Exec. Order No. 12,898, 59 Fed. Reg. 7629 (Feb. 16, 1994). Minority populations are those groups that include: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic.

⁹⁷ See *Promising Practices* at 21–25.

⁹⁸ Here, Commission staff selected Jefferson and Orange County, Texas, as the reference communities to ensure that affected environmental justice communities are properly identified. EA at 33.

54. To identify potential environmental justice communities in the project area, the EA used 2021 U.S. Census American Community Survey data⁹⁹ for the race, ethnicity, and poverty data at the state, county, and block group level.¹⁰⁰ Additionally, in accordance with *Promising Practices*, staff used EJScreen, EPA's environmental justice mapping and screening tool, as an initial step to gather information regarding minority and low-income populations; potential environmental quality issues; environmental and demographic indicators; and other important factors.¹⁰¹

55. Once staff collected the block group level data,¹⁰² as discussed in further detail below, staff conducted an impacts analysis for the identified environmental justice communities; and evaluated health or environmental hazards, the natural physical environment, and associated social, economic, and cultural factors to determine whether impacts were disproportionate and adverse on environmental justice communities and also whether those impacts were significant.¹⁰³ Commission staff assessed whether impacts on an environmental justice community were disproportionate and adverse based

⁹⁹ U.S. Census Bureau, American Community Survey 2021 ACS 5-Year Estimates Detailed Tables, File# B17017, *Poverty Status in the Past 12 Months by Household Type by Age of Householder*, <https://data.census.gov/cedsci/table?q=B17017>; File #B03002 *Hispanic or Latino Origin by Race*, <https://data.census.gov/cedsci/table?q=b03002>.

¹⁰⁰ For this project, Commission staff determined that a 5-kilometer radius around the proposed aboveground facilities was the appropriate unit of geographic analysis for assessing project impacts on the environmental justice communities. A 5-kilometer radius is sufficiently broad considering the likely concentration and range of construction and operational air and noise emissions, visual impacts, and traffic impacts proximal to the compressor stations. Air dispersion modeling shows that the largest radius of impact for any individual pollutant that exceeds the Significant Impact Level is 4.2 kilometers.

¹⁰¹ EPA, *Purposes and Uses of EJScreen* (Jan. 9, 2024) <https://www.epa.gov/ejscreen/purposes-and-uses-ejscreen> ("Screening tools should be used for a 'screening-level' look. Screening is a useful first step in understanding or highlighting locations that may be candidates for further review.").

¹⁰² See EA at tbl. 7 and fig. 2.

¹⁰³ An agency may determine that impacts are disproportionate and adverse, but not significant within the meaning of NEPA and in other circumstances an agency may determine that an impact is *both* disproportionate and adverse and significant within the meaning of NEPA. See *Promising Practices* at 33.

on whether those impacts were predominately borne by that community, consistent with EPA's recommendations in *Promising Practices*.¹⁰⁴

56. The EA identified 31 environmental justice block groups, out of 34 total block groups, within the Expansion Project's area of review.¹⁰⁵ Project work within environmental justice communities would occur at the brine disposal well, brine disposal pipeline, and access roads for these facilities. The Central Storage Site is not located within an environmental justice community.¹⁰⁶

57. The EA determined that potential impacts from the brine disposal facilities on the identified environmental justice communities may include socioeconomic, traffic, visual resources, air quality, and noise impacts.¹⁰⁷ Environmental justice concerns are not present for other resource areas such as geology, soils, groundwater, surface water, wetlands, vegetation, wildlife, fisheries, land use, or cultural resources due to the minimal overall impact the project would have on those resource areas. We concur with this determination.

a. Public Engagement

58. There were multiple opportunities for public engagement during the Commission's environmental review processes.¹⁰⁸ Golden Triangle placed complete copies of the application and project fact sheets, in both English and Spanish, in four public libraries in Beaumont, Texas, that serve minority and low-income populations.¹⁰⁹ Golden Triangle also provided a project website that accommodates Spanish-speaking residents.¹¹⁰

¹⁰⁴ There are various approaches to determining whether an action will cause a disproportionate and adverse impact. One recommended approach is to consider whether an impact would be "predominantly borne by minority populations or low-income populations." *See id.* at 44–46.

¹⁰⁵ *See* EA at tbl. 7.

¹⁰⁶ *Id.* at fig. 2.

¹⁰⁷ *Id.* at 40.

¹⁰⁸ *Id.* at 32.

¹⁰⁹ *Id.*

¹¹⁰ *See Golden Triangle Storage Expansion Project*, CALICHE, <https://calichestorage.com/gts-expansion-project> (last visited May 3, 2024).

59. Golden Triangle held an open house at the Theodore Johns Library in Beaumont, Texas, on December 13, 2023. The open house was publicized in both English and Spanish, and included a Spanish-speaking interpreter.¹¹¹ Golden Triangle further states that it mailed English and Spanish literature to landowners, public officials, and environmental justice stakeholders that may be affected by the project.¹¹² Additionally, Golden Triangle provided a supplemental Spanish language public notice print ad, which ran on November 2, 2023, in *El Perico*, with distribution in the Beaumont, Texas area.¹¹³

60. EPA recommends continued engagement with surrounding communities throughout the duration of this project. In compliance with Environmental Condition 8 of the appendix to this order, Golden Triangle will provide monthly status reports on construction progress, which will be publicly available. Golden Triangle has also committed to continued engagement with surrounding communities throughout the duration of the Expansion Project.¹¹⁴

b. Socioeconomic and Traffic Impacts

61. A non-local workforce of approximately 50 workers is anticipated during the construction period. Due to the small size of the permanent workforce, the EA concludes there would be no effect on employment and overall community income during the project.¹¹⁵ Temporary use of available rental housing by the non-local workforce in Jefferson County would represent a low utilization, less than a two percent temporary increase of the county population, with little impact on populations. The EA concludes that the overall socioeconomic effects of the project would be negligible and temporary,

¹¹¹ EA at 32.

¹¹² Environmental justice stakeholders include: Beaumont Mosque; Golden Triangle Church; Golden Triangle Minority Business Council; Greater Good Hope Baptist Church; Hispanic Business Association of Southeastern Texas; Iglesia Nueva Esperanza; NAACP Beaumont; New Horizons Church; New Pilgrim Baptist Church; Our Lady of the Assumption; South Park Baptist Church; St. Peter's Baptist Church; United Way of Beaumont and North Jefferson County; and Word of Faith Full Gospel Church.

¹¹³ *El Perico: Spanish Newspaper*, (2024) <https://elpericonews.com>.

¹¹⁴ Golden Triangle Apr. 12, 2024 Response. Ex. 1, at 3.

¹¹⁵ EA at 41.

with no significant impact on environmental justice communities near the project area.¹¹⁶ We agree.

62. Use of local roads would increase during construction, which would result in a higher volume of traffic, traffic delays, increased commute times, a greater risk of vehicle accidents, and interruption of residential access.¹¹⁷ However, the impacts would be limited to periods of active construction over the course of the construction period, during daytime hours between 7:00 a.m. and 7:00 p.m., Monday through Saturday. Golden Triangle would coordinate its proposed construction activities with local officials to minimize any disruptions to the local traffic patterns. Given Golden Triangle's implementation of traffic management procedures and the temporary nature of construction activities, the EA concludes that project impacts on traffic would not significantly impact environmental justice communities.¹¹⁸ We agree.

63. The EA concludes that, given the scope of the project, the small workforce size compared to the population of the socioeconomic study area, and the mitigation measures proposed by Golden Triangle, the project's impacts on socioeconomics and traffic would not result in significant adverse effects on environmental justice populations.¹¹⁹ We agree.

c. Visual Impacts

64. The brine disposal facilities are in an agricultural area and located within an environmental justice community. The EA identified that the nearest residence is 0.6 mile east of the well site. During construction, visual impacts from the brine disposal facility would include the presence of construction vehicles and equipment. Once construction is complete, the visual change associated with the new permanent well pad and access road would be consistent with the current visual setting.

65. Existing and proposed project facilities at the Central Storage Site are not located within an environmental justice community and are unlikely to affect visual resources during construction and operation. The Central Storage site facilities are screened by existing vegetation and are located about 0.5 mile from the nearest public highway. The

¹¹⁶ *Id.*

¹¹⁷ *Id.* at 42.

¹¹⁸ *Id.* at 43.

¹¹⁹ *Id.* at 42.

EA concludes that visual impacts from the project on environmental justice communities would be minimal and less than significant.¹²⁰ We agree.

d. Air Quality

66. The affected environmental justice communities are in portions of Jefferson County listed as attainment of the NAAQS for all criteria pollutants.¹²¹ Similarly, the brine disposal well, brine disposal pipeline, and associated access road are in an environmental justice community that is within attainment areas.¹²²

67. The EA states that the Expansion Project would result in air quality impacts during construction, including emissions from fossil-fueled equipment and fugitive dust.¹²³ Construction at the project's proposed facilities would contribute to air quality impacts from drilling, vegetation clearing, land preparation, trenching, and installation activities over a period of 1 year and 11 months.¹²⁴ Golden Triangle would implement several mitigation measures during construction to minimize construction air impacts. These measures include: (1) limiting the areas of ground disturbance and implementing measures to control construction-related emissions and fugitive dust in compliance with state regulations and Commission requirements; (2) maintaining construction equipment in good working order, and using mufflers for equipment exhaust; and (3) using its Fugitive Dust Control Plan. Also, Golden Triangle would ensure that each construction equipment engine complies with EPA emission standards throughout its life to lessen exhaust emissions, and would use low-sulfur diesel fuel in non-road construction equipment.¹²⁵ Air emissions from construction equipment would be limited to the immediate vicinity of the construction area and would be temporary.¹²⁶ The EA concludes that, given these measures and the temporary nature of construction, the

¹²⁰ *Id.*

¹²¹ *Id.* at 48.

¹²² *Id.*

¹²³ *Id.* at 53.

¹²⁴ *Id.*

¹²⁵ *Id.* at 43, 46, 59.

¹²⁶ *Id.* at 44

construction emissions associated with the project would not significantly affect local or regional air quality, including surrounding environmental justice communities.¹²⁷

68. The EA also states that the Expansion Project would result in air quality impacts associated with operation, resulting from the operation of the natural gas-fired compressor engines, glycol reboilers, emergency generator, fugitive emissions from leaks from piping components, and compressor blowdowns.¹²⁸ The EA states that operational emissions would not contribute to an exceedance of the air quality standards in the project area. The EA concludes that operational emissions from the Expansion Project would be localized and would not significantly affect environmental justice communities.¹²⁹ We agree.

69. Given the temporary nature of construction and limited operational emissions, emissions from construction and operation activities for the project are not expected to cause or significantly contribute to a violation of any applicable ambient air quality standard, or significantly affect local or regional air quality.¹³⁰ The EA concludes that, overall, the construction and operational emissions from the project would not have significant adverse air quality impacts on the environmental justice populations in the project area.¹³¹ We agree.

e. Noise

70. EPA notes that one of the Noise Sensitive Areas (NSA) identified in the EA is a building 1,950 feet northwest of the project and is located within an environmental justice block group. EPA recommends gaining firsthand knowledge of whether the building is inhabited and if so, further recommends additional engagement with the occupant.¹³² In response to EPA's comments, Golden Triangle clarified that the building is abandoned.¹³³ No other NSAs are located in any environmental block group.¹³⁴ Based on the foregoing,

¹²⁷ *Id.*

¹²⁸ *Id.* at 43.

¹²⁹ *Id.* at 44.

¹³⁰ *Id.* at 58.

¹³¹ *Id.* at 44.

¹³² EPA Mar. 5, 2024 Revised Comments.

¹³³ Golden Triangle Apr. 12, 2024 Response. Ex. 1, at 2.

¹³⁴ EA at 44.

the project would not result in significant construction noise impacts on local residents within the surrounding environmental justice populations.¹³⁵

f. Cumulative Impacts

71. EPA comments recommend further evaluation of the present and reasonably foreseeable future cumulative impacts to the surrounding minority and low-income overburdened communities affected by the project. The comments do not specify what additional cumulative impacts should be studied and does not explain why the cumulative impacts described in the EA are inadequate. The EA identified nine other past, present, and reasonably foreseeable projects within the scope of review for impacts on environmental justice communities.¹³⁶ Seven of these projects may have beneficial impacts on environmental justice communities by creating jobs and economic opportunities, while the other two projects would have minor, less than significant impacts on air quality, housing, and local police and fire service in environmental justice communities. The EA concludes that cumulative impacts resulting from the project and other nearby projects would not be significant.¹³⁷ We agree.

g. Environmental Justice Conclusion

72. As described in the EA, impacts associated with the construction and operation of the Expansion Project on environmental justice communities would be disproportionate and adverse because they would be predominantly borne by environmental justice communities.¹³⁸ However, the project construction impacts associated with socioeconomic impacts, traffic, visual impacts, air quality, and construction noise for these components would be temporary and less than significant. Similarly, the project's operational impacts will be less than significant and no permanent adverse impacts on environmental justice communities are expected.¹³⁹ Furthermore, Golden Triangle has committed to implement mitigation measures as described in EA.¹⁴⁰ We agree with the conclusions in the EA.

¹³⁵ *Id.* at 45.

¹³⁶ *Id.* at 67.

¹³⁷ *Id.*

¹³⁸ *Id.* at 46.

¹³⁹ *Id.* at 67.

¹⁴⁰ *Id.* at 45–46.

7. Greenhouse Gas Emissions and Climate Change

73. NEPA requires agencies to include in NEPA documents reasonably foreseeable environmental effects of the proposed agency action.¹⁴¹ The CEQ defines effects or impacts as “changes to the human environment from the proposed action or alternatives that are reasonably foreseeable,” which includes those effects that “occur at the same time and place” and those that “are later in time or farther removed in distance, but are still reasonably foreseeable.”¹⁴² An impact is reasonably foreseeable if it is “sufficiently likely to occur such that a person of ordinary prudence would take into account in reaching a decision.”¹⁴³

74. We find that GHG emissions from construction and operation are reasonably foreseeable effects of the Expansion Project.¹⁴⁴ The estimated construction emissions of the project are about 7,618 metric tons of carbon dioxide equivalents (CO₂e)¹⁴⁵ and the estimated operational emissions are approximately 40,045 metric tons per year of new CO₂e emissions.¹⁴⁶ The estimated social cost of GHGs from the project is either

¹⁴¹ See Fiscal Responsibility Act of 2023, Pub. L. No. 118-5, § 321, 137 Stat. 10 (2023).

¹⁴² 40 C.F.R. § 1508.1(g).

¹⁴³ *Id.* § 1508.1(aa). See generally *Dep’t of Transp. v. Pub. Citizen*, 541 U.S. 752, 767 (2004) (explaining that “NEPA requires ‘a reasonably close causal relationship’ between the environmental effect and the alleged cause” and that “[t]he Court analogized this requirement to the ‘familiar doctrine of proximate cause from tort law’”) (citation omitted); *Food & Water Watch v. FERC*, 28 F.4th 277, 288 (D.C. Cir. 2022) (“Foreseeability depends on information about the ‘destination and end use of the gas in question.’”) (citation omitted); *Sierra Club v. FERC*, 867 F.3d 1357, 1371 (D.C. Cir. 2017) (*Sabal Trail*) (“FERC should have estimated the amount of power-plant carbon emissions that the pipelines will make possible.”).

¹⁴⁴ EA at 53, 70.

¹⁴⁵ See *id.* at 54.

¹⁴⁶ The EA incorrectly reported the operational GHG emissions of the Expansion Project, relying on estimates from Golden Triangle’s application as opposed to revised numbers provided by Golden Triangle following an information request. *Id.* at 70. This order provides the revised, accurate operational GHG emissions. See Golden Triangle Nov. 16, 2023 Response to Nov. 13 Environmental Information Request. The GHG emissions from construction and the social cost of GHG values in the EA were calculated using the revised emissions numbers and do not need to be updated.

\$10,330,673 (assuming a discount rate of 5%), \$38,490,218 (assuming a discount rate of 3%), \$57,959,928 (assuming a discount rate of 2.5%), or \$116,477,414 (using the 95th percentile of the social cost of GHGs with a discount rate of 3%).¹⁴⁷

75. As we have done in prior certificate orders, the EA compares estimated project GHG emissions to the total GHG emissions of the United States as a whole and at the state level. This comparison allows us to place project emissions in context. At a national level, 5,586 million metric tons of CO₂e were emitted in 2021 (inclusive of CO₂e sources and sinks).¹⁴⁸ Construction emissions from the Expansion Project could potentially increase CO₂e emissions based on the national 2021 levels by 0.00007%.¹⁴⁹ In subsequent years, the project's operational emissions could potentially increase emissions by 0.0008% based on the national 2021 levels.¹⁵⁰

76. At the state level, Texas' energy related CO₂ emissions in 2021 totaled 663.5 million metric tons.¹⁵¹ Construction emissions from the project could potentially increase CO₂ emissions based on Texas' state's 2021 levels by 0.0006%. In subsequent years, operational emissions from the project could potentially increase CO₂ emissions in the state of Texas by 0.006% based on state 2021 levels.¹⁵²

77. When states have GHG emissions reduction targets, we compare a project's GHG emissions to those state goals to provide additional context. Texas does not have established reduction targets.

¹⁴⁷ EA at 72. The IWG draft guidance identifies costs in 2020 dollars.

¹⁴⁸ EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2021* at ES-5 (Table ES-2) (April 2023), <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2021>.

¹⁴⁹ EA at 70.

¹⁵⁰ *Id.*

¹⁵¹ U.S. Energy Information Administration, *Table 1, State Energy-Related Carbon Dioxide Emissions by Year, Unadjusted: Texas* (Jan 1, 2024) <https://www.eia.gov/environment/emissions/state/>.

¹⁵² EA at 71.

78. We clarify that for informational purposes, the EA disclosed an estimate of the social cost of GHGs.¹⁵³ Although we have recognized in some past orders that social cost of GHGs may have utility in certain contexts such as rulemakings,¹⁵⁴ we have also found that calculating the social cost of GHGs does not enable the Commission to determine credibly whether the reasonably foreseeable GHG emissions associated with a project are significant or not significant in terms of their impact on global climate change.¹⁵⁵ Currently, however, there are no criteria to identify what monetized values are significant for NEPA purposes, and we are currently unable to identify any such appropriate criteria.¹⁵⁶ Nor are we aware of any other currently scientifically accepted method that would enable the Commission to determine the significance of reasonably foreseeable

¹⁵³ *Id.* at 70 (“Commission staff have not identified a methodology to attribute discrete, quantifiable, physical effects on the environment resulting from the Project’s incremental contribution to GHGs.”).

¹⁵⁴ *Fla. Se. Connection, LLC*, 164 FERC ¶ 61,099, at PP 35–37 (2018).

¹⁵⁵ *See Mountain Valley Pipeline, LLC*, 161 FERC ¶ 61,043, at P 296 (2017), *order on reh’g*, 163 FERC ¶ 61,197 (2018), *aff’d sub nom. Appalachian Voices v. FERC*, No. 17-1271, 2019 WL 847199 (D.C. Cir. Feb. 19, 2019) (unpublished); *Del. Riverkeeper Network v. FERC*, 45 F.4th 104, 111 (D.C. Cir. 2022). The social cost of GHGs tool merely converts GHG emissions estimates into a range of dollar-denominated figures; it does not, in itself, provide a mechanism or standard for judging “significance.”

¹⁵⁶ *Tenn. Gas Pipeline Co., L.L.C.*, 181 FERC ¶ 61,051, at P 37 (2022); *see also Mountain Valley Pipeline, LLC*, 161 FERC ¶ 61,043 at P 296, *order on reh’g*, 163 FERC ¶ 61,197 at PP 275–297, *aff’d sub nom. Appalachian Voices v. FERC*, 2019 WL 847199, at * 2 (unpublished) (“[The Commission] gave several reasons why it believed petitioners’ preferred metric, the Social Cost of Carbon tool, is not an appropriate measure of project-level climate change impacts and their significance under NEPA or the Natural Gas Act. That is all that is required for NEPA purposes.”); *EarthReports v. FERC*, 828 F.3d 949, 956 (D.C. Cir. 2016) (accepting the Commission’s explanation why the social cost of carbon tool would not be appropriate or informative for project-specific review, including because “there are no established criteria identifying the monetized values that are to be considered significant for NEPA purposes”); *Tenn. Gas Pipeline Co., L.L.C.*, 180 FERC ¶ 61,205, at P 75 (2022); *see, e.g., LA Storage, LLC*, 182 FERC ¶ 61,026, at P 14 (2023); *Columbia Gulf Transmission, LLC*, 180 FERC ¶ 61,206, at P 91 (2022).

GHG emissions.¹⁵⁷ The U.S. Court of Appeals for the District of Columbia Circuit (D.C. Circuit) has repeatedly upheld the Commission's decisions not to use the social cost of carbon, including to assess significance.¹⁵⁸ In fact, the D.C. Circuit recently affirmed the Commission's decision to not analyze the social cost of carbon in its NEPA analysis,¹⁵⁹ rejected the suggestion that it was required to do so, found that the

¹⁵⁷ See, e.g., *LA Storage, LLC*, 182 FERC ¶ 61,026 at P 14 (“[T]here are currently no criteria to identify what monetized values are significant for NEPA purposes, and we are currently unable to identify any such appropriate criteria.”).

¹⁵⁸ See, e.g., *Food & Water Watch v. FERC*, Nos. 22-1214, 22-1315, 2024 WL 2983833, at *6-7 (D.C. Cir. June 14, 2024) (*Tenn. East 300*) (noting that “NEPA regulations [do not] require an agency to clarify every environmental impact as significant or insignificant,” and upholding the Commission’s decision not to assess “significance” despite having done so in the past); *Ala. Mun. Distribs. Grp. v. FERC*, No. 22-1101, 2024 WL 1864820, at *5 (D.C. Cir. Apr. 30, 2024) (*Evangeline Pass*) (noting that the Commission “considered using the social cost of carbon tool, but . . . ultimately rejected the approach because FERC had not yet identified a workable means of applying the tool”); *Ctr. for Biological Diversity v. FERC*, 67 F.4th 1176, 1184 (D.C. Cir. 2023) (*Alaska LNG*) (explaining that “the Commission compared the Project’s direct emissions with existing Alaskan and nationwide emissions,” “declined to apply the social cost of carbon for the same reasons it had given in a previous order”; describing those reasons as: (1) “the lack of consensus about how to apply the social cost of carbon on a long time horizon,” (2) that “the social cost of carbon places a dollar value on carbon emissions but does not measure environmental impacts as such,” and (3) “FERC has no established criteria for translating these dollar values into an assessment of environmental impacts”; and recognizing that the Commission’s “approach was reasonable and mirrors analysis . . . previously upheld” and that the Commission “had no obligation in this case to consider the social cost of carbon”) (citations omitted); *EarthReports v. FERC*, 828 F.3d at 956 (upholding the Commission’s decision not to use the social cost of carbon tool due to a lack of standardized criteria or methodologies, among other things); *Del. Riverkeeper Network v. FERC*, 45 F.4th 104 (also upholding the Commission’s decision not to use the social cost of carbon); *Appalachian Voices v. FERC*, 2019 WL 847199 (same).

¹⁵⁹ *Tenn. East 300*, 2024 WL 2983833, at *6 (“FERC need not attempt to monetize those emissions through a Social Cost of Carbon model which FERC views as unreliable for analyzing individual projects.”); *Evangeline Pass*, No. 22-1101, 2024 WL 1864820, at *5 (D.C. Cir. Apr. 30, 2024) (upholding the Commission’s decision not to rely on the social cost of carbon tool where, in the instant proceeding, Commission staff estimated the social cost of carbon, publicly disclosed those estimates, and shared them in the NEPA document); *Alaska LNG*, 67 F.4th at 1184 (“Rather than use the social cost of carbon, the Commission compared the Project’s direct emissions with existing Alaskan

petitioner's arguments "fare no better when framed as NGA challenges," and then, in the very same paragraph, sustained the Commission's public interest determination as "reasonable and lawful."¹⁶⁰ We note that there currently are no accepted tools or methods for the Commission to use to determine significance; therefore, the Commission is not herein characterizing these emissions as significant or insignificant.

79. Accordingly, we have completed the required "hard look" and have satisfied our obligations under NEPA.

8. Environmental Impacts Conclusion

80. Based on the analysis in the EA, as supplemented herein,¹⁶¹ we conclude that if the project is constructed and operated in accordance with Golden Triangle's application and supplements, and in compliance with the environmental conditions in the appendix to this order, our approval of this proposal would not constitute a major federal action significantly affecting the quality of the human environment.¹⁶²

IV. Conclusion

81. The Expansion Project will enable Golden Triangle to expand its natural gas storage facilities and increase its service capability to provide interstate connections for its existing customers and the market. We find that Golden Triangle has demonstrated a need for the Expansion Project, that the project will not have adverse impacts on Golden Triangle's existing customers or other companies and their existing customers, and that the project's benefits will outweigh any adverse economic effects on landowners and surrounding communities. We have analyzed the technical aspects of the project and conclude that it has been appropriately designed to achieve its intended purpose. Based on the discussion above, we find under section 7 of the NGA that the public convenience and necessity requires approval of the Expansion Project, subject to the conditions in this order.

and nationwide emissions. It declined to apply the social cost of carbon for the same reasons it had given in a previous order. . . FERC's approach was reasonable and mirrors analysis we have previously upheld.").

¹⁶⁰ *Id.*

¹⁶¹ Although the analysis in the EA provides substantial evidence for our conclusions in this order, it is the order itself that serves as our record of decision. The order supersedes any inconsistent discussion in the EA.

¹⁶² We are not making a significance determination regarding GHG impacts for the reasons discussed in P 78, *supra*.

82. Compliance with the environmental conditions appended to our orders is integral to ensuring that the environmental impacts of approved projects are consistent with those anticipated by our environmental analyses. Thus, Commission staff carefully reviews all information submitted. Only when satisfied that the applicant has complied with all applicable conditions will a notice to proceed with the activity to which the conditions are relevant be issued. We also note that the Commission has the authority to take whatever steps are necessary to ensure the protection of environmental resources during the construction activities of the Expansion Project, including authority to impose any additional measures deemed necessary to ensure continued compliance with the intent of the conditions of the order, as well as the avoidance or mitigation of unforeseen adverse environmental impacts resulting from project construction and operation.

83. Any state or local permits issued with respect to the jurisdictional facilities authorized herein must be consistent with the conditions of this certificate. The Commission encourages cooperation between interstate pipelines and local authorities. However, this does not mean that state and local agencies, through application of state or local laws, may prohibit or unreasonably delay the construction or operation of facilities approved by the Commission.¹⁶³

84. The Commission on its own motion received and made a part of the record in this proceeding all evidence, including the application, and exhibits thereto, and all comments, and upon consideration of the record.

The Commission orders:

(A) A certificate of public convenience and necessity is issued to Golden Triangle under section 7(c) of the NGA, authorizing the construction and operation of the proposed storage facilities, as described more fully in this order and in the application.

(B) The authorization issued in Ordering Paragraph (A) is conditioned on Golden Triangle's compliance with all applicable Commission regulations under the NGA, particularly the general terms and conditions set forth in Parts 154, 157, and 284, and paragraphs (a), (c), (e), and (f) of section 157.20 of the regulations.

¹⁶³ See 15 U.S.C. § 717r(d) (state or federal agency's failure to act on a permit considered to be inconsistent with Federal law); see also *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 310 (1988) (state regulation that interferes with the Commission's regulatory authority over the transportation of natural gas is preempted) and *Dominion Transmission, Inc. v. Summers*, 723 F.3d 238, 245 (D.C. Cir. 2013) (noting that state and local regulation is preempted by the Natural Gas Act to the extent it conflicts with federal regulation, or would delay the construction and operation of facilities approved by the Commission).

(C) Golden Triangle shall file a written statement affirming it has executed firm contracts for the capacity levels and terms of service represented in its filed precedent agreement, prior to commencing construction.

(D) Pursuant to section 157.20(b) of the Commission's regulations, the facilities authorized in Ordering Paragraph (A) must be constructed and placed in service within three years of the date of the final order in this proceeding.

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

(F) Golden Triangle's request for continued authority to charge market-based rates for firm and interruptible storage service and interruptible hub and wheeling services is approved, as discussed in this order.

(G) Waiver is granted of the Commission's regulations deemed inapplicable to storage service providers charging market-based rates, as discussed in this order.

(H) Golden Triangle shall notify the Commission, as required by section 284.504(b) of the Commission's regulations, if future changes in circumstances affect its market power status. Golden Triangle must notify the Commission within 10 days of acquiring knowledge of any such changes. The notification must include a detailed description of the new facilities and their relationship to Golden Triangle.

By the Commission. Commissioner See is not participating.
Commissioner Chang is not participating.

(S E A L)

Debbie-Anne A. Reese,
Acting Secretary.

Appendix A**Engineering Conditions**

1. The following conditions shall apply to the Golden Triangle, Central Storage Site Facility
 - a. The maximum inventory of natural gas stored in Golden Triangle, Central Storage Site facility shall not exceed the certificated levels of 44.16 Bcf at 14.73 psia and 60 degrees Fahrenheit (Cavern 1: 12.24 Bcf; Cavern 2: 12.24 Bcf; Cavern 3: 11.20 Bcf; and Cavern 4: 8.48 Bcf).
 - b. The maximum gas storage shut-in stabilized pressure as measured at the casing shoe shall be approximately 2,820 psia for Caverns 3 and 4.
 - c. The minimum gas storage shut-in stabilized pressure as measured at the casing shoe shall be approximately 840 psia for Caverns 3 and 4.
2. Within three years of placing Caverns 3 and 4 into service, Golden Triangle shall file a report with the Secretary of the Commission on the final storage operating capability of each cavern that includes the final gas storage capacity (total, working, and cushion), minimum and maximum pressure, and casing shoe depth, based on Golden Triangle's evaluation of a cavern's operating parameters. Golden Triangle shall include in its report all supporting data and working papers used in its evaluation of each cavern's final operating parameters.
3. Golden Triangle shall establish and maintain a subsidence network over the proposed new Caverns 3 and 4 storage area.
4. Golden Triangle shall periodically log Cavern 3 and 4 wells to check casing integrity.
5. Golden Triangle shall conduct sonar surveys of Caverns 3 and 4 every five years to:
 - a. monitor their dimensions and shape, including the cavern roof,
 - b. estimate pillar thickness between caverns throughout the storage operations, and
 - c. file the results with the Commission. In the alternative, no less than 30 days before placing the cavern into service, Golden Triangle may file with the Commission, for prior approval of the methodology, a detailed

cavern integrity monitoring plan that is consistent with the intent of the sonar survey.

6. Golden Triangle shall conduct an annual inventory verification study on Caverns 3 and 4.
7. Before commencing natural gas storage operations in Caverns 3 and 4, Golden Triangle shall:
 - a. conduct Mechanical Integrity Tests (MITs) on Caverns 3 and 4 after reworking of the brine wells and leaching of Caverns 3 and 4, and file with the Secretary of the Commission the results of the MITs and confirmation from the Texas Railroad Commission (TRRC) that the results meet TRRC standards;
 - b. file with the Secretary of the Commission a statement from the TRRC confirming compliance with TRRC's regulations prior to placing Caverns 3 and 4 into service;
 - c. file with the Secretary of the Commission the results of any new sonar surveys of Caverns 3 and 4, including plan view and cross-sections;
 - d. file with the Secretary of the Commission copies of well logs including Neutron logs, Gamma Ray logs, Cement Bond and Caliper logs for the Cavern 3 and 4 wells;
 - e. file with the Secretary of the Commission a casing inspection base log or an equivalent survey or test obtained over the entire cased interval for the innermost string of the Caverns 3 and 4 wells;
 - f. file with the Secretary of the Commission copies of the latest interferences, tracer surveys, or other testing or analysis on the caverns, to verify the lack of communication between the caverns;
 - g. file with the Secretary of the Commission, the volume of rubble at the base of Caverns 3 and 4, including the methodology for determining such volume; and
 - h. file with the Secretary of the Commission, geological cross sections (when additional data is obtained) through the total project area showing all geologic units and cavern shapes.

8. Twice annually, Golden Triangle shall conduct a leak detection test during storage operations to determine the integrity of each cavern/wellbore, casing, and wellhead. In addition, Golden Triangle shall file a report, with the Secretary of the Commission summarizing the results of these tests until one year after the operating capacities of Caverns 3 and 4 have reached the maximum defined in Engineering Condition (1)(a).
9. Golden Triangle shall operate its facility in such manner as to prevent/minimize gas loss or migration.
10. Golden Triangle shall file with the Secretary of the Commission semi-annual reports (to coincide with the termination of the injection and withdrawal cycles) containing the following information in accordance with Section 157.214(c) of the Commission's regulations (volumes shall be stated at 14.73 psia and 60 degrees Fahrenheit, and pressures shall be stated in psia):
 - a. the daily volumes of natural gas injected into and withdrawn from the storage reservoir;
 - b. the volume of natural gas and the shut-in wellhead pressures for each cavern at the end of the reporting period;
 - c. the maximum daily injection and withdrawal rates experienced for the entire storage field during the reporting period, including the average working pressure on such maximum days taken at a central measuring point where the total volume injected or withdrawn is measured;
 - d. the results of any tests performed to determine the actual size, configuration, or dimensions of the storage caverns;
 - e. a discussion of current operating problems and conclusions; and
 - f. other data or reports which may aid the Commission in the evaluation of the storage project.
11. Golden Triangle shall file the above semi-annual reports in accordance with section 157.214(c) of the Commission's regulations until one year after the storage inventory volume has reached or closely approximates the maximum level defined in this order.
12. Golden Triangle shall file for reference its Integrity Monitoring Program for its gas storage facility consistent with the parameters outlined in American Petroleum Institute's Recommended Practice 1170: Design and Operation of Solution-Mined Salt Caverns Used for Natural Gas Storage (as applicable).

Appendix B

Environmental Conditions

As recommended in the EA, this authorization includes the following conditions:

1. Golden Triangle shall follow the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests) and as identified in the EA, unless modified by the Order. Golden Triangle must:
 - a. request any modification to these procedures, measures, or conditions in a filing with the Secretary;
 - b. justify each modification relative to site-specific conditions;
 - c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and
 - d. receive approval in writing from the Director of the Office of Energy Projects (OEP), or the Director's designee, **before using that modification.**
2. The Director of OEP, or the Director's designee, has delegated authority to address any requests for approvals or authorizations necessary to carry out the conditions of the Order, and take whatever steps are necessary to ensure the protection of environmental resources during construction and operation of the project. This authority shall allow:
 - a. the modification of conditions of the Order;
 - b. stop-work authority; and
 - c. the imposition of any additional measures deemed necessary to ensure continued compliance with the intent of the conditions of the Order as well as the avoidance or mitigation of unforeseen adverse environmental impact resulting from construction and operation.
3. **Prior to any construction activities**, Golden Triangle shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, Environmental Inspectors (EIs), and contractor personnel will be informed of the EI's authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities.

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

Golden Triangle's exercise of eminent domain authority granted under NGA Section 7(h) in any condemnation proceedings related to the Order must be consistent with these authorized facilities and locations. Golden Triangle's right of eminent domain granted under the NGA section 7(h) does not authorize it to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

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

This requirement does not apply to extra workspace allowed by the Commission's Plan and/or minor field realignments per landowner needs and requirements which do not affect other landowners or sensitive environmental areas such as wetlands.

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

- a. implementation of cultural resources mitigation measures;
- b. implementation of endangered, threatened, or special concern species mitigation measures;
- c. recommendations by state regulatory authorities; and
- d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.

6. Within 60 days of the acceptance of the authorization and before construction begins, Golden Triangle shall file an Implementation Plan with the Secretary for review and written approval by the Director of OEP, or the Director's designee. Golden Triangle must file revisions to the plan as schedules change. The plan shall identify:

- a. how Golden Triangle will implement the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests), identified in the EA, and required by the Order;
- b. how Golden Triangle will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to onsite construction and inspection personnel;
- c. the number of EIs assigned, and how the company will ensure that sufficient personnel are available to implement the environmental mitigation;
- d. company personnel, including EIs and contractors, who will receive copies of the appropriate material;
- e. the location and dates of the environmental compliance training and instructions Golden Triangle will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change);
- f. the company personnel (if known) and specific portion of Golden Triangle's organization having responsibility for compliance;
- g. the procedures (including use of contract penalties) Golden Triangle will follow if noncompliance occurs; and
- h. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:
 - i. the completion of all required surveys and reports;
 - ii. the environmental compliance training of onsite personnel;
 - iii. the start of construction; and
 - iv. the start and completion of restoration.

7. Golden Triangle shall employ at least one EI for the project. The EI shall be:
 - a. responsible for monitoring and ensuring compliance with all mitigation measures required by the Order and other grants, permits, certificates, or other authorizing documents;
 - b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 6 above) and any other authorizing document;
 - c. empowered to order correction of acts that violate the environmental conditions of the Order, and any other authorizing document;
 - d. a full-time position, separate from all other activity inspectors;
 - e. responsible for documenting compliance with the environmental conditions of the Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and
 - f. responsible for maintaining status reports.
8. Beginning with the filing of its Implementation Plan, Golden Triangle shall file updated status reports with the Secretary on a **monthly basis** until all construction and restoration activities are complete. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:
 - a. an update on Golden Triangle's efforts to obtain the necessary federal authorizations;
 - b. the construction status of the project, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally-sensitive areas;
 - c. a listing of all problems encountered and each instance of noncompliance observed by the EI(s) during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);
 - d. a description of the corrective actions implemented in response to all instances of noncompliance;
 - e. the effectiveness of all corrective actions implemented;

- f. a description of any landowner/resident complaints which may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and
 - g. copies of any correspondence received by Golden Triangle from other federal, state, or local permitting agencies concerning instances of noncompliance, and Golden Triangle's response.
- 9. Golden Triangle must receive written authorization from the Director of OEP, or the Director's designee, **before commencing construction of any project facilities**. To obtain such authorization, Golden Triangle must file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).
- 10. Golden Triangle must receive written authorization from the Director of OEP, or the Director's designee, **before placing the project into service**. Such authorization will only be granted following a determination that rehabilitation and restoration of the right-of-way and other areas affected by the project are proceeding satisfactorily.
- 11. **Within 30 days of placing the authorized facilities in service** Golden Triangle shall file an affirmative statement with the Secretary, certified by a senior company official:
 - a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or
 - b. identifying which of the conditions in the Order Golden Triangle has complied with or will comply with. This statement shall also identify any areas affected by the project where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.
- 12. **Within five days of receipt of a water quality certification issued by the TCEQ and the Railroad Commission of Texas**, Golden Triangle shall file the complete certification, including all conditions. All conditions attached to the water quality certification constitute mandatory conditions of the Certificate Order. **Prior to construction**, Golden Triangle shall file, for review and written approval of the Director of OEP, or the Director's designee, any revisions to its project design necessary to comply with the water quality certification conditions.
- 13. Golden Triangle **shall not** begin construction activities **until**:

- a. Golden Triangle files with the Secretary comments on the cultural resources reports and plans from the State Historic Preservation Office;
- b. the Advisory Council on Historic Preservation is afforded an opportunity to comment if historic properties would be adversely affected; and
- c. Commission staff reviews and the Director of OEP, or the Director's designee, approves the cultural resources reports and plans, and notifies Golden Triangle in writing that treatment plans/mitigation measures may be implemented and/or construction may proceed.

All materials filed with the Commission containing **location, character, and ownership** information about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering: "**CUI/PRIV- DO NOT RELEASE.**"

14. Golden Triangle shall file a noise survey with the Secretary **no later than 60 days** after placing the modified Central Compressor Station in service. If a full power load condition noise survey is not possible, Golden Triangle shall provide an interim survey at maximum possible horsepower load and provide the full load survey **within six months**. If the noise attributable to the operation of all the equipment at the Central Compressor Station under interim or full horsepower load conditions exceeds a day-night sound level of 55 A-weighted decibels at any nearby NSAs, Golden Triangle shall file a report on what changes are needed and shall install additional noise controls to meet the level **within one year** of the in-service date. Golden Triangle shall confirm compliance with the above requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls.

Document Content(s)

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