



Spire Storage West LLC
3773 Richmond Avenue, Suite 300
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October 9, 2020

VIA E-FILING

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

Re: Spire Storage West LLC
Docket No. CP21-____-000
Abbreviated Application for an Amendment of Certificate of Public Convenience
and Necessity, Reaffirmation of Market-Based Rate Authority, and Related
Authorizations

Dear Secretary Bose:

Pursuant to Section 7(c) of the Natural Gas Act (“NGA”), as amended,¹ and Part 157, Subpart A of the Federal Energy Regulatory Commission’s (“FERC” or “Commission”) regulations,² Spire Storage West LLC (“Spire Storage”) hereby submits this abbreviated application (“Application”) for (i) amendment of the certificate of public convenience and necessity issued by the Commission on September 1, 1998,³ in Docket No. CP98-256-000, for Spire Storage’s Clear Creek Storage Field in Uinta County, Wyoming, (ii) reaffirmation of market-based rate authority, and (iii) related authorizations and waivers, as requested herein, and any other such waiver, authority and further relief as may be necessary in order to grant the authorizations requested.

As described more fully in the Application, Spire Storage is seeking authorization to expand its natural gas storage facilities at the Clear Creek Storage Field in Uinta County, Wyoming. Specifically, Spire Storage requests an order authorizing the installation of four compressor units and related processing equipment at the Clear Creek central gas processing plant (“Clear Creek Plant”); relocation, replacement, and installation of existing and new natural gas liquids, condensate, fuel, supply oil, and produced water tanks as well as associated truck load-out facilities at the Clear Creek Plant; expansion of Clear Creek well facilities through the drilling and installation of 11 new injection/withdrawal wells and one new water disposal well on existing well pads in the Clear Creek Storage Field, with construction of associated gathering pipelines; and construction of a total of approximately 10.6 miles of pipeline to transport natural gas between the Canyon Creek compressor station, the Clear Creek Plant, and a new interconnection with the Kern River Gas Transmission mainline (the “Sagebrush Pipeline”). Spire Storage also requests authorization to increase the total site-rated

¹ 15 U.S.C. §§ 717f(b), 717f(c) (2018).

² 18 C.F.R. Pt. 157, Subpart A (2020).

³ *Clear Creek Storage Company, L.L.C.*, 84 FERC ¶ 61,210 (1998).

compression at the Clear Creek Plant from 3,740 horsepower (“hp”) to 24,340 hp; increase the working gas and base gas capacity of the Clear Creek Storage Field from 4.0 billion cubic feet (“Bcf”) each to 20.0 Bcf each; increase the injection and withdrawal capacities at the Clear Creek Storage Field from 35 million cubic feet per day (“MMcf/day”) and 50 MMcf/day, respectively, to 350 MMcf/day and 500 MMcf/day, respectively; and establish a buffer zone for the Clear Creek Storage Field extending one-quarter mile around the reservoir. In light of the increase in storage, injection, and withdrawal capacities, Spire Storage requests reaffirmation of its authorization to charge market-based rates for firm and interruptible storage and hub services.

Spire Storage respectfully requests that the Commission issue an order approving the Application by September 1, 2021.

In accordance with the Commission’s submission guidelines, Spire Storage has organized this filing into three volumes as follows:

- Volume I: Public
- Volume II: **Contains Privileged Information – Do Not Release**
- Volume III: **Contains Critical Energy Infrastructure Information – Do Not Release**

Volume I comprises the public materials, which contains the Application and its public exhibits provided pursuant to the Commission’s regulations, including the public version of Exhibit F-I (Environmental Report). Volume II comprises the privileged information and contains cultural resources information, confidential landowner information, and proprietary maps and models related to the reservoir at the Clear Creek Storage Field. Volume II has been marked “**Contains Privileged Information – Do Not Release**” and “**CUI//PRIV.**”⁴ Privileged information should be treated as confidential; this information is for use by Commission Staff only and not to be released to the public.⁵ Volume III comprises the Critical Energy Infrastructure Information (“CEII”) and contains flow diagrams and related piping details, as well as certain plot diagrams. Volume III has been marked “**Contains Critical Energy Infrastructure Information – Do Not Release**” and “**CUI//CEII,**”⁶ and should be treated as confidential pursuant to Order Nos. 630, *et seq.* and is for use by the Commission Staff only and not to be released to the public.⁷ Spire Storage requests that this information be treated as CEII for five years, unless re-designated by the CEII Coordinator.

⁴ See Notice of Document Labelling Guidance for Documents Submitted to or Filed with the Commission or Commission Staff, Accession No. 20170414-3009 (Apr. 14, 2017).

⁵ 18 C.F.R. § 388.112(b).

⁶ 18 C.F.R. § 388.113 (d).

⁷ *Critical Energy Infrastructure Information*, Order No. 630, 102 FERC ¶ 61,190 (2003) *order on reh’g*, Order No. 630-A, 104 FERC ¶ 61,106 (2003); 18 C.F.R. §§ 388.112(b) and 388.113.

Questions pertaining to privileged information may be submitted to:

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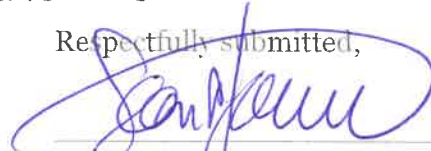
Pursuant to the Commission's electronic filing guide,⁸ Spire Storage is eFiling this Application. Due to the national emergency proclaimed by the President of the United States in Proclamation 9994, dated March 13, 2020, regarding the Novel Coronavirus Disease (COVID-19) Outbreak, Spire Storage respectfully requests a waiver from the requirement to provide two complete paper copies of this Application to OEP Room 62-46 and one complete paper copy to OGC-EP Room 101-56. Spire Storage will provide such paper copies of this Application upon request by the Commission or Commission Staff.

⁸ FED. ENERGY REGUL. COMM'N, FERC FILING GUIDE/QUALIFIED DOCUMENTS LIST 14 (2017), available at <https://www.ferc.gov/docs-filing/efiling/filing.pdf>.

Hon. Kimberly D. Bose
October 9, 2020
Page 4

If you have any questions regarding this filing, please contact the undersigned at (346) 308-7555 or Damien Lyster at (713) 758-2025.

Respectfully submitted,



Sean P. Jamieson
General Counsel
Spire Storage West LLC

cc: Pamela Boudreau (Volume I only)
Dawn Ramsey (Volume I only)
Rich McGuire (Volume I only)

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Spire Storage West LLC

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Docket No. CP21-___-000

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

Pursuant to Section 7(c) of the Natural Gas Act (“NGA”), as amended,¹ and Part 157, Subpart A of the Federal Energy Regulatory Commission’s (“FERC” or “Commission”) regulations,² Spire Storage West LLC (“Spire Storage”) hereby submits this abbreviated application (“Application”) for (i) amendment of the certificate of public convenience and necessity issued by the Commission on September 1, 1998,³ in Docket No. CP98-256-000, for Spire Storage’s Clear Creek Storage Field (“Clear Creek”) in Uinta County, Wyoming, (ii) reaffirmation of market-based rate authority, and (iii) related authorizations and waivers, as requested herein, and any other such waiver, authority and further relief as may be necessary in order to grant the authorizations requested.

As described more fully herein, Spire Storage requests authorization to expand its natural gas storage facilities at the Clear Creek Storage Field, including construction, installation and relocation of certain facilities and equipment, and an increase in certificated capacities at the Clear Creek Storage Field (collectively, the “Clear Creek Expansion Project” or “Project”). The Project will include installation of four compressor units and

¹ 15 U.S.C. §§ 717f(b), 717f(c) (2018).

² 18 C.F.R. Pt. 157, Subpart A (2020).

³ *Clear Creek Storage Company, L.L.C.*, 84 FERC ¶ 61,210 (1998).

related processing equipment at the Clear Creek central gas processing plant (“Clear Creek Plant”); relocation, replacement, and installation of existing and new natural gas liquids (“NGL”), condensate, fuel, supply oil, and produced water tanks as well as associated truck load-out facilities from the Clear Creek Plant; expansion of Clear Creek well facilities through the drilling and installation of 11 new injection/withdrawal (“I/W”) wells and one new water disposal well on existing well pads in the Clear Creek Storage Field, with construction of associated gathering pipelines; and construction of a total of approximately 10.6 miles of pipeline to transport natural gas between the Canyon Creek compressor station (“Canyon Creek Plant”) and the Clear Creek Plant (“Sagebrush Pipeline North”) and between the Clear Creek Plant and a new interconnection with the Kern River Gas Transmission mainline (“Sagebrush Pipeline South,” and together with the Sagebrush Pipeline North, the “Sagebrush Pipeline”).

Spire Storage also requests authorization to increase the total site-rated compression at the Clear Creek Plant from 3,740 horsepower (“hp”) to 24,340 hp; increase the working gas and base gas capacity of the Clear Creek Storage Field from 4.0 billion cubic feet (“Bcf”) each to 20.0 Bcf each; increase the injection and withdrawal capacities at the Clear Creek Storage Field from 35 million cubic feet per day (“MMcf/day”) and 50 MMcf/day, respectively, to 350 MMcf/day and 500 MMcf/day, respectively; and establish a buffer zone for the Clear Creek Storage Field extending one-quarter mile around the reservoir. As demonstrated in Section VI of this Application and the testimony and market power analyses of Mr. Toby Bishop, included herewith in Exhibit I, after increasing the storage, injection, and withdrawal capacities, Spire Storage will continue to be unable to exercise market power if granted the authority to continue to provide firm and

interruptible storage and hub services at market-based rates. Accordingly, Spire Storage requests the Commission reaffirm Spire Storage's market-based rate authorization.

Spire Storage respectfully requests that the Commission issue an order on or before September 1, 2021, providing the authorizations and reaffirmation requested in this Application.

In support hereof, Spire Storage submits the following:

I.
IDENTITY OF APPLICANT

The exact legal name of Spire Storage is Spire Storage West LLC. It is a Delaware limited liability company with its principal office at 3773 Richmond Avenue, Suite 300, Houston, Texas 77046. Spire Storage, a “natural gas company” as defined in the NGA,⁴ owns and operates two depleted reservoir natural gas storage facilities located in Uinta County, Wyoming: the Belle Butte Storage Field and the Clear Creek Storage Field. Spire Storage provides natural gas storage services in interstate commerce at market-based rates in accordance with its FERC Gas Tariff on file with the Commission.⁵

Spire Storage is an indirect subsidiary of Spire Inc. (“Spire”), a public utility holding company based in St. Louis, Missouri. Spire’s natural gas utility subsidiaries serve approximately 1.7 million customers in Missouri, Alabama, and Mississippi. Another Spire subsidiary, Spire Marketing Inc., operates a natural gas marketing business based in Houston, Texas. Finally, an additional subsidiary of Spire, Spire STL Pipeline LLC, has

⁴ 15 U.S.C. § 717a(2) (2018).

⁵ See *Spire Storage West LLC, et al.*, 166 FERC ¶ 62,038 (2018) (authorizing the combined operation of the Belle Butte Storage Field, formerly the Ryckman Creek facilities, and the Clear Creek Storage Field).

constructed and currently operates a 65-mile interstate natural gas pipeline system in Illinois and Missouri, with a transportation capacity of 400,000 dekatherms per day.⁶

Spire Storage requests that all correspondence and communications regarding this

Notice be directed to the individuals listed below:

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* Spire Storage requests that these persons be included on the Commission's official service list and further requests waiver of Rule 203(b)(3) of the Commission's Rules and Regulations, 18 C.F.R. § 385.203(b)(3), in order to permit Spire Storage to have more than two persons on the service list in this proceeding.

II. BACKGROUND

Spire Storage is a natural gas storage company that owns and operates an interstate natural gas storage system subject to the jurisdiction of the Commission. Spire Storage's natural gas storage system is comprised of two storage reservoirs in Uinta County, Wyoming: the Belle Butte Storage Field and the Clear Creek Storage Field. Development of the Clear Creek Storage Field was authorized in 1998 in Docket No. CP98-256-000,⁷

⁶Authorization to Commence Service of Certain Project Facilities, Docket No. CP17-40-000, *et al.* (letter order issued Nov. 14, 2019) (authorizing Spire STL Pipeline LLC to commence service on the Spire STL Pipeline Project).

⁷ *Clear Creek Storage Company, L.L.C.*, 84 FERC ¶ 61,210 (1998). Through a series of transactions, Clear Creek Storage Company, L.L.C. and Ryckman Creek Resources, LLC merged and continue operation as Spire Storage West LLC, successor to Ryckman Creek Resources, LLC, including operations under the blanket certificate authority granted in Docket No. CP11-24-000. *See Spire Storage West LLC, et al.*, 166 FERC ¶ 62,038 (2018); Notice of Completion of Acquisition and Abandonment, Docket Nos. CP18-520-000, *et al.* (filed Feb. 11, 2019) (notifying the Commission that Spire Storage, the successor to Ryckman Creek Resources, LLC, completed the combination of the two companies effective as of February 4, 2019).

and included construction and installation of the existing Clear Creek Plant. The Clear Creek Plant currently includes, among other facilities, two gas-fired compressors totaling 3,740 hp, facilities used to separate oil, condensate and water from gas withdrawn as a result of storage operations at the Clear Creek Plant and associated NGL and condensate storage and containment facilities, as well as auxiliary facilities constructed as part of authorized gas storage facilities at the site.

Spire Storage is now seeking authorization to construct, install, and replace certain facilities as further set forth herein in order to increase storage capacity at the Clear Creek Storage Field, enhance the operational capabilities of the Clear Creek Plant and Clear Creek Storage Field, and ensure the reliable, safe operation of the Clear Creek Storage Field and Clear Creek Plant. Spire Storage proposes to increase the working gas capacity of the Clear Creek Storage Field from 4.0 Bcf to 20.0 Bcf, increase the base gas capacity from 4.0 Bcf to 20.0 Bcf, increase the injection capacity from 35 MMcf/day to 350 MMcf/day, and increase the withdrawal capacity from 50 MMcf/day to 500 MMcf/day. The proposed increase in storage and I/W capacity is designed to meet the demand for gas storage from Spire Storage's existing customers and the market. In addition to continued demand for natural gas for industrial applications and retail consumption, Spire Storage anticipates that, as Western energy markets shift toward increased reliance on renewable energy resources, additional natural gas storage will serve as a bulwark against the intermittent nature of these renewable energy resources and help provide necessary baseload reliability to the electric grid. Spire Storage's facility is ideally located to provide a flexible supply of natural gas storage to serve the needs of downstream industrial users, retail consumers, and power producers. The market interest in the Project was borne out in the results of the non-binding open season held by Spire Storage from

August 5 through September 4, 2020. A total of 15 market participants indicated interest in a total of 24 Bcf of storage capacity from the Project.

In addition to increasing storage capacity, the Clear Creek Expansion Project will enhance the operational capabilities of the Clear Creek Plant and Clear Creek Storage Field by increasing cyclability and injection capability at the Clear Creek Storage Field to improve overall field performance. Further, the Project will facilitate the flow of gas to five interstate pipelines, Kern River Gas Transmission, Overthrust Pipeline, Questar Pipeline, Ruby Pipeline, and Northwest Pipeline, thereby providing Spire Storage's customers with greater access to natural gas supplies and markets and strengthening the natural gas pipeline and storage grid. Specifically, with the construction of the Sagebrush Pipeline, the Project will connect the Clear Creek Plant with the Canyon Creek Plant – where Spire Storage interconnects with four of these pipelines – and will establish a new interconnect with Kern River Gas Transmission. Finally, the Project will re-establish a connection with Questar Pipeline adjacent to the Clear Creek Plant.

Additionally, the four new compressor units proposed in the Clear Creek Expansion Project will provide necessary operational flexibility and reliability at the Clear Creek Plant. The Clear Creek Plant currently requires its two compressor units operating together in order to meet the facility's certificated capacity. These existing, aging compressor units currently require lengthy periods of downtime to complete necessary maintenance and repair activities, and the lack of any backup or redundant compression facilities means that Spire Storage cannot continue to operate at or near its certificated compression when either or both units are offline. The early injection season of 2020 proved challenging, with outages on one of the existing compressor units approaching over 48 days, and outages on the other existing compressor unit approaching over 51 days. These outages during the

2020 injection season are representative of recurring outages at the Clear Creek Plant over the last several years and demonstrate the need for additional compression at the Clear Creek Plant in order to meet currently certificated capacity. Such outages have burdened operations at the Clear Creek Plant over the past two years, limiting Spire Storage's ability to take advantage of optimal conditions to inject gas. Constructing and installing the new compressor units and associated equipment will allow Spire Storage to increase the working and base gas capacities at Clear Creek Storage Field and ensure that Spire Storage will be able to provide the necessary compression to operate at its certificated capacity if the two existing compressors are unavailable.

The Clear Creek Expansion Project also is intended to minimize certain potential safety hazards at the Clear Creek Plant and ensure the integrity and safety of the Clear Creek Storage Field reservoir. The current layout of the Clear Creek Plant requires heavy truck traffic associated with the transportation of NGLs, condensates, fuel, supply oil, and produced water tanks from the Clear Creek Plant to occur within close proximity to the existing and planned facilities at the plant, including the new compressor units. The Project includes relocation and replacement of these and other facilities to reduce truck traffic at the Clear Creek Plant, as well as the construction of a new access road near the Clear Creek Plant in order to improve overall safety of operations. Finally, in order to ensure the integrity and safety of the Clear Creek Storage Field, Spire Storage requests authorization to establish a one-quarter-mile buffer zone around the Clear Creek Storage Field reservoir.

III. DESCRIPTION OF AMENDMENT

The facilities and activity proposed for the Clear Creek Expansion Project are concentrated within and near the Clear Creek Plant and Clear Creek Storage Field. Specifically, the primary components of the Project will include:

- installation of four compressor units and related processing equipment at the Clear Creek Plant;
- expansion of Clear Creek well facilities through the drilling and installation of 11 new I/W wells and one new water disposal well, all on existing well pads in the Clear Creek Storage Field, and construction of associated gathering pipelines;
- relocation/replacement and installation of existing and new tanks and associated truck refueling facilities from the Clear Creek Plant to a nearby tank pad located adjacent to well pad 23-9B, approximately 0.2 miles west of the Clear Creek Plant; and
- re-establishment of an existing connection with Questar Pipeline adjacent to the Clear Creek Plant and construction of a total of approximately 10.6 miles of pipeline to transport natural gas between the Canyon Creek Plant and the Clear Creek Plant (i.e., the Sagebrush Pipeline North) and between the Clear Creek Plant and a new interconnection with Kern River Gas Transmission (i.e., the Sagebrush Pipeline South, and together with the Sagebrush Pipeline North, the Sagebrush Pipeline), as well as the related interconnections and associated facilities.

A. Increase in Capacities; Reservoir Buffer Zone

The Project facilities will allow for an increase in working gas capacity in the Clear Creek Storage Field from 4.0 Bcf to 20.0 Bcf, an increase in the base gas capacity from 4.0 Bcf to 20.0 Bcf, and increases in the injection and withdrawal capacities from the Clear Creek Storage Field from 35 MMcf/day to 350 MMcf/day and from 50 MMcf/day to 500 MMcf/day respectively. The approximate current and proposed capacities of the Spire Storage facility (consisting of the Clear Creek Storage Field and the Belle Butte Storage Field) are included in the table below.

| | | Current Certificated Capacity | Proposed Certificated Capacity |
|------------------------------------|------------------------|-------------------------------------|--------------------------------------|
| Clear Creek Storage Field | Working Gas | 4.0 Bcf | 20.0 Bcf |
| | Base Gas | 4.0 Bcf | 20.0 Bcf |
| | Reservoir Total | 8.0 Bcf | 40.0 Bcf |
| | Max Injection Rate | 35 MMcf/day | 350 MMcf/day |
| | Max Withdrawal Rate | 50 MMcf/day | 500 MMcf/day |
| Belle Butte Storage Field | Working Gas | 35 Bcf | 35 Bcf |
| | Base Gas | 18 Bcf | 18 Bcf |
| | Reservoir Total | 53 Bcf | 53 Bcf |
| | Max Injection Rate, | 350 MMcf/day | 350 MMcf/day |
| | Max Withdrawal Rate | 480 MMcf/day | 480 MMcf/day |
| Total Spire Storage Facility | Working Gas | 39 Bcf | 55 Bcf |
| | Base Gas | 22 Bcf | 38 Bcf |
| | Total Storage Capacity | 61 Bcf | 93 Bcf |
| | Max Injection Rate | 385 MMcf/day | 700 MMcf/day |
| | Max Withdrawal Rate | 530 MMcf/day | 980 MMcf/day |

In order to ensure the integrity and safety of operations of the expanded Clear Creek Storage Field, Spire Storage requests authorization to establish a one-quarter-mile buffer zone around the area of the reservoir in which the additional working gas and base gas will be stored. The location of the buffer zone is shown in Resource Report 6 in the Environmental Report included herewith as Exhibit F-I and is supported by the results of the most recent reservoir models, which are depicted on the maps set forth in Appendix J

to the Environmental Report, with such maps being privileged and confidential and marked “**Contains Privileged Information—Do Not Release**” and “**CUI//PRIV**”.

B. Clear Creek Plant Site

At the Clear Creek Plant site, Spire Storage proposes to install four new Ariel KBZ/6 compressor units, each with a Caterpillar 3616 natural gas engine, increasing the total site-rated horsepower at the Clear Creek Plant from 3,740 hp to 24,340 hp. As further set forth in the Environmental Report included herewith in Exhibit F-I, Spire Storage will relocate certain facilities in order to accommodate the new compressor units and related facilities, and will construct and install auxiliary equipment to support its operations at the gas handling facility. The auxiliary equipment will include supply oil storage and delivery facilities, additional gas treating and pressure regulation facilities, one new water boiler, two new air compressors, two new air dryers, one new natural gas-fired generator to replace the existing diesel generator, and electrical distribution components.

To provide safer access to the Clear Creek Plant for large and heavy equipment, Spire Storage plans to construct a new gravel access road along the south side of the Clear Creek Plant and a new entrance on the east side of the Clear Creek Plant, reducing the need for vehicles to maneuver in the limited space available at the Clear Creek Plant site. Construction activity at the Clear Creek Plant will extend beyond the current fence line to accommodate additional facilities and relocated facilities from the existing Clear Creek Plant site, as well as to site pipeline facilities and appurtenant equipment further described below.

C. Tank Pad Modifications

Spire Storage proposes to relocate and replace certain existing facilities at the Clear Creek Plant to a tank pad adjacent to well pad 23-9B, approximately 0.2 miles west of the

Clear Creek Plant. Those certain existing facilities planned for relocation or replacement, presently located at or near the proposed sites for new Project equipment, include one existing 50,000-gallon aboveground NGL tank and NGL metering skid, two existing 400-barrel aboveground condensate tanks, and related truck refueling facilities (including two aboveground fuel tanks), and associated control, containment, and auxiliary facilities. In order to provide room for the new compressor units and other facilities within the Clear Creek Plant and minimize safety concerns associated with these tanks, Spire Storage will replace the tanks described above and relocate them along with all of the other facilities described in this paragraph to the tank pad adjacent to well pad 23-9B. The proposed relocation of the tank truck load-out facility also will include replacement of two existing fuel tanks for operations with two new larger tanks (1,000-gallon gasoline and 3,000-gallon diesel) and associated containment facilities. New flowlines and cables will connect the relocated tank equipment with the Clear Creek Plant. In order to accommodate the additional withdrawal capacity at the Clear Creek Plant, Spire Storage also will install one additional aboveground 60,000-gallon NGL tank and two additional 400-barrel condensate tanks.

D. Storage Field Expansion and Gathering System

At the Clear Creek Storage Field, Spire Storage will add 11 new I/W wells on four existing well pads. One I/W well will be placed on well pad 13-3B, two wells will be located on well pad 35-4B, four will be located on well pad 44-4B, and four wells will be located on well pad 22-9B, with interconnecting piping and electrical lines connecting the new wells to new and existing gathering piping, metering facilities, and ancillary equipment and facilities at the well pads and within the field. The location of the proposed

I/W wells and related facilities is further set forth in Resource Report 1 in the Environmental Report included herewith as Exhibit F-I.

The new I/W well on well pad 13-3B will be connected to the Clear Creek Plant via existing facilities without the need for additional gathering pipeline. In order to connect the new I/W wells at well pad 44-4B and well pad 35-4B, Spire Storage proposes to replace approximately 0.9 miles of 8-inch diameter aboveground gas gathering header north pipeline with a new 12-inch diameter gathering header pipeline extending from well pad 44-4B to a new pig launcher/receiver station to be located northeast of the Clear Creek Plant. The new I/W wells on well pad 22-9B will be connected to the Clear Creek Plant by a new 8-inch-diameter gathering header south pipeline, which will extend approximately 0.3 miles and terminate at the new pig launcher/receiver station. The gathering lines will be collocated with fiber optic lines, a 2-inch-diameter non-potable water line, and additional lines necessary for operation of the new facilities on the well pads.

The Project also will include the installation of a new water disposal well on well pad 32-9B, including associated piping and equipment at the well pad. Spire Storage proposes to install approximately 0.1 miles of new 3-inch-diameter produced water disposal pipeline from the well pad to the Clear Creek Plant to tie the disposal facilities into the existing piping system at the Clear Creek Plant.

E. Sagebrush Pipeline and Pipeline Interconnects

Spire Storage is currently connected to five interstate natural gas pipelines: Kern River Gas Transmission, Northwest Pipeline, Overthrust Pipeline, Questar Pipeline, and Ruby Pipeline. The Clear Creek Expansion Project will further facilitate the flow of gas to these interstate natural gas pipelines by constructing the Sagebrush Pipeline North to

connect the Clear Creek Plant with the Canyon Creek Plant⁸ – where Spire Storage interconnects with four of these pipelines – as well as by re-establishing a connection with Questar Pipeline adjacent to the Clear Creek Plant and constructing and installing a new interconnect with Kern River Gas Transmission via the Sagebrush Pipeline South.

The new 10.6-mile Sagebrush Pipeline is comprised of two segments – the 20-inch-diameter Sagebrush Pipeline North and the 24-inch-diameter Sagebrush Pipeline South. The Sagebrush Pipeline North will extend approximately 7.0 miles, from the pig launcher/receiver station at the northeast side of the Clear Creek Plant to the Canyon Creek Plant, where it will tie in to the existing interconnections. The Sagebrush Pipeline South will be approximately 3.6 miles long and will extend south from the pig launcher/receiver station near or at the Clear Creek Plant to a new interconnect with Kern River Gas Transmission, with a metering station, pressure control facilities, and a pig launcher/receiver at the new interconnect. Power will be provided to the new interconnect with Kern River Gas Transmission through a new 3.5-mile, 4,160-volt powerline to be constructed by Spire Storage from the existing Painter Compressor Station⁹ southwest of the interconnect.

In addition to pig launcher/receiver facilities at the ends of the 12-inch gathering header north line and 8-inch gathering header south line, Spire Storage will install pig launcher/receiver facilities for the Sagebrush Pipeline within the Canyon Creek Plant site at the north terminus of the 20-inch Sagebrush Pipeline North, at the south terminus of the

⁸ As discussed above and more clearly depicted in Exhibit F, Spire Storage currently is comprised of the Belle Butte Plant, the Clear Creek Plant, and the Canyon Creek Plant (a compressor station).

⁹ The Painter Compressor Station is owned and operated by Kern River Gas Transmission and is connected to Spire Storage via an existing 5.2-mile, 8-inch pipeline connected to the Clear Creek Plant.

20-inch Sagebrush Pipeline South, and at the pig launcher/receiver station outside the east gate of the Clear Creek Plant site.

The location and design of the Project facilities, including additional appurtenant facilities, access roads, workspace requirements, and associated construction and decommissioning activities, are more fully described in the Environmental Report included herewith as Exhibit F-I.

F. Project Construction and In-Service

Spire Storage requests the Commission issue an order authorizing the Project on or before September 1, 2021, in order to allow Spire Storage to commence construction activities in the fall of 2021. Due to weather conditions in the Project area, Spire Storage will have a limited window of time each calendar year in which to construct the Project. As a result, Spire Storage anticipates constructing the Project in three separate construction windows, with each window commencing when weather conditions allow for construction in the spring and ending when weather conditions make Project construction activities unsafe or environmentally challenging.¹⁰ Construction is expected to be completed and restoration is expected to commence in October 2023, with restoration completed and the Project placed into service in summer 2024. Accordingly, and consistent with Commission precedent,¹¹ Spire Storage further requests the Commission authorize the Project to be constructed and placed into service on or before November 1, 2024.

¹⁰ Spire Storage does not anticipate having distinct “phases” of construction in the sense that the Project would involve specific facilities sequencing, but Spire Storage does intend to optimize construction activity within the available construction windows based on conditions at the Project site, progress of construction activities, and optimal development of the Project and the Spire Storage facility, with some facilities constructed in the first construction window, or phase, and other facilities in subsequent construction windows. Spire Storage will clearly identify in requests for authorization to commence construction those facilities for which authorization is being requested at the time the request is submitted.

¹¹ See, e.g., *D’Lo Gas Storage, LLC*, 166 FERC ¶ 61,102 at P 10 (2019) (order amending certificate and requiring storage facility modifications to be placed into service within four years of the date of the order).

IV. CERTIFICATE POLICY STATEMENT AND PUBLIC CONVENIENCE AND NECESSITY

The Commission established criteria for determining whether there is a need for a proposed project and whether the proposed project will serve the public interest in the Commission's Statement of Policy on the Certification of New Interstate Natural Gas Pipeline Facilities.¹² The Certificate Policy Statement explains that, in deciding whether to authorize the construction of major new pipeline facilities, the Commission balances public benefits against any potential adverse consequences.¹³ The Commission's stated goal is to give appropriate consideration to the enhancement of competitive alternatives, the possibility of over-building, 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.¹⁴ Once the applicant demonstrates that the benefits to be achieved by a project will outweigh the potential effects and that the applicant has attempted to minimize any adverse effects, the Commission will find that the project is required by the public convenience and necessity.¹⁵

As further set forth below, the proposed Clear Creek Expansion Project meets the criteria in the Certificate Policy Statement. The public interest is served by meeting market demand for increased storage capacity, enhancing operational capabilities at the Clear Creek Storage Field, and ensuring safe, reliable storage services to Spire Storage's

¹² See *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227 (1999), *order clarifying statement of policy*, 90 FERC ¶ 61,128 (2000), *order further clarifying statement of policy*, 92 FERC ¶ 61,094 (2000) ("Certificate Policy Statement").

¹³ *Tennessee Gas Pipeline Co.*, 92 FERC ¶ 61,142 at pp. 61,519-61,520 (2000).

¹⁴ *Id.*

¹⁵ Certificate Policy Statement at p. 61,746.

customers going forward. The proposed increase in storage and I/W capacity will meet the demand for gas storage to support industrial and retail consumption of natural gas in the West, as well as the development of intermittent renewable energy resources, which can be supported by the baseload reliability natural gas provides to the electric grid. The Project as proposed includes facilities modifications and relocations, as well as a proposed buffer zone around the Clear Creek Storage Field, to ensure that Spire Storage's operations are safe and reliable. The Project will not result in any subsidization from existing customers, and no existing capacity currently under contract will be affected by the proposed Project, therefore no termination or reduction in service to any existing customers will result. Once completed, the Project will provide additional storage capacity and flexibility to shippers on the interstate pipelines connecting to the Spire Storage facilities, strengthening the pipeline transportation and storage grid. Spire Storage has designed the Project to minimize adverse effects, including effects on environmental and other resources, as further set forth in the Environmental Report included herewith as Exhibit F-I. Spire Storage respectfully submits that the benefits of the Project as proposed outweigh the negative residual effects of the Project, and that the Project is required by the public convenience and necessity.

A. Threshold No-Subsidy Requirement

The Certificate Policy Statement contains a threshold requirement for existing entities proposing new construction, stating that the entity must be prepared to financially support the project without relying on subsidization from existing customers.¹⁶ As discussed herein, Spire Storage has been authorized by the Commission to charge market-based rates, and continues to meet the requirements for market-based rate authorization. Accordingly, Spire Storage is fully at-risk for recovering the costs of the Project and the Clear Creek Expansion Project meets the threshold non-subsidization requirement established in the Commission’s Certificate Policy Statement.¹⁷

B. No Adverse Effects on Existing Customers or on Existing Pipelines or their Captive Customers

The Certificate Policy Statement requires an analysis to identify potentially adverse effects of the project on the existing customers of the pipeline proposing the project, existing pipelines in the market and their captive customers, or landowners and communities affected by the construction, and to determine whether the applicant has made efforts to eliminate or minimize those adverse effects.¹⁸ If residual adverse effects 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 residual adverse effects.”¹⁹

¹⁶ *Id.*

¹⁷ *See, e.g., Bluewater Gas Storage, LLC*, 171 FERC ¶ 61,132 (2020) (“By charging market-based rates, Bluewater assumes the economic risks associated with the costs of the project’s facilities.”); *Gulf South Pipeline Co., LP*, 168 FERC ¶ 61,034 (2019) (“By charging market-based rates, Gulf South assumes the economic risks associated with the costs of the project’s facilities; therefore, there will be no subsidization from its existing customers.”).

¹⁸ Certificate Policy Statement at p. 61.389.

¹⁹ *Id.*

The Project will result in no adverse effects on existing customers, and will only improve services available to customers and to the market. Spire Storage will not be reducing any services offered or capacity available as a result of the Project, but will be increasing storage, injection, and withdrawal capacities available at the Spire Storage facility. As further set forth in Section VI of this Application and Exhibit I hereto, the Spire Storage facility is located in a competitive market area and the proposed increase in capacities at the Clear Creek Storage Field will not involve the displacement of any other market-area storage capacity or otherwise have an adverse impact on existing pipelines in the market or their customers.²⁰

C. Minimal Potential for Adverse Impacts to Landowners and Communities Affected by the Facilities

With respect to the impact on landowners or the communities affected by the Project construction, as detailed in the resource reports included in the Environmental Report included herewith as Exhibit F-I, the Clear Creek Expansion Project will improve reliability and safety of operations at the existing Clear Creek Plant and Clear Creek Storage Field, while minimizing adverse impacts to landowners and communities near the Spire Storage facility. Spire Storage has designed the Project to collocate aboveground and linear facilities where practicable, including use of common right-of-way and drilling and installation of all 11 I/W wells and the one water disposal well on existing well pads.

Spire Storage has been in communication with landowners, local communities, and various federal, state, and local agencies regarding the Project. Specifically, Spire Storage has identified six private landowners, plus federal and state lands, that may be directly affected by the Project and three additional abutting landowners. Spire Storage contacted

²⁰ See, e.g., *D'Lo Gas Storage, LLC*, 166 FERC ¶ 61,102 at P 10 (2019); *Petal Gas Storage, L.L.C., et al.*, 142 FERC ¶ 61,119 at P 26 (2013).

landowners prior to conducting field surveys for permission to survey their lands and, as set forth in Section X, has committed to transmitting official landowner notifications following the filing of this Application. Spire Storage will continue to communicate with affected landowners and relevant communities, governments, and agencies throughout the progression of the Project and will implement mitigation measures where practicable and economical to minimize the potential impacts on landowners and affected communities. Prior to initializing construction-related activities, Spire Storage will secure right-of-way easements or other required authorizations from landowners whose properties will be crossed or used by the Project; Spire Storage does not anticipate needing to utilize eminent domain for any portion of the Project.

D. Benefits Associated with the Project Outweigh the Adverse Effects

As described above, Spire Storage customers and the market will benefit from increased capacity and greater reliability and operational capabilities of the Clear Creek Storage Field. The increased storage capacity will continue to support growing demand for natural gas in the Western United States, including natural gas needed for power production to accommodate the intermittent nature of new renewable energy resources. The market demand for such capacity is demonstrated by the positive response received during Spire Storage's non-binding open season, held from August 5 through September 4, 2020, in which 15 market participants indicated interest in a total of 24 Bcf of storage capacity.

The new I/W wells proposed for the Project will allow Spire Storage to efficiently develop the additional storage, injection, and withdrawal capacities, and allow for increased cyclability and injection capability to improve overall performance of the Clear Creek Storage Field. This improved performance affords Spire Storage's customers and

the market greater flexibility in meeting natural gas storage and supply needs. The Project will also improve the reliability and safety of Spire Storage's operations at the Clear Creek Storage Field. The four additional compressor units will help address recent operational difficulties with existing compressor units at the Clear Creek Plant, providing more reliable storage service to Spire Storage's customers and the market. Relocation of the facilities discussed above, as well as the creation of a buffer zone surrounding the reservoir in the Clear Creek Storage Field, will help to ensure the integrity and safety of Spire Storage's operations.

Spire Storage has designed the Project to minimize the adverse effects of the Project on environmental and other resources, as further set forth in the Environmental Report included herewith in Exhibit F-I. Specifically, the Project minimizes aboveground disturbance in part by collocating aboveground and linear facilities where practicable. Additional mitigation efforts, including techniques, locations, and timing of construction, as further set forth in the Environmental Report, will further reduce the adverse effects of the Project. Based on these benefits and the minimal negative impacts, Spire Storage respectfully submits that the benefits of the Project as proposed in this Application outweigh the negative residual effects.

E. The Project is Required by the Public Convenience and Necessity

For the reasons discussed above, and consistent with the criteria set forth in the Certificate Policy Statement, Spire Storage respectfully submits that granting the authorizations requested herein is consistent with, and required by, the public convenience and necessity. In summary, the Project satisfies the Commission's Certificate Policy Statement and is consistent with the Commission's economic, competition, and environmental goals. As described in detail in this Application and in accompanying

exhibits, the Project benefits far outweigh the Project's potential adverse impacts, which have been or will be significantly mitigated through Spire Storage's efforts, as described in this Application and in the Environmental Report included herewith in Exhibit F-I. Accordingly, the Project meets the standards of the Certificate Policy Statement, is in the public interest, and is required by the public convenience and necessity.

V. ENVIRONMENTAL IMPACT

In accordance with Part 380 of the Commission's regulations,²¹ Spire Storage has prepared the Environmental Report included herewith as Exhibit F-I. The Resource Reports in Exhibit F-I more fully describe any potential environmental impact of the Clear Creek Expansion Project and demonstrate that the Project will have minimal adverse effects on environmental and cultural resources. As reflected in the Resource Reports, Spire Storage can adequately mitigate the environmental impacts associated with the Clear Creek Expansion Project to ensure impacts are less than significant. Spire Storage will incorporate standard environmental mitigation measures into its construction specifications and commits to implement the FERC Upland Erosion Control, Revegetation, and Maintenance Plan (FERC 2013a) and FERC Wetland and Waterbody Construction and Mitigation Procedures (FERC 2013b) as minimum standards during construction. The Project will be constructed in accordance with applicable environmental permits, approvals, and regulations.

The Resource Reports demonstrate that any adverse impacts associated with the Clear Creek Expansion Project can be adequately mitigated or avoided, the proposed action

²¹ 18 C.F.R. § 380.12.

is the best alternative, and significant resources will not be irreversibly or irretrievably lost due to construction activities.

VI. RATES

Spire Storage requests reaffirmation of its authorization to charge market-based rates for the storage and related services it provides. The Commission recently determined that “Spire Storage lacks the ability to exercise significant market power,” and “therefore reaffirm[ed] Spire Storage’s authority to charge market-based rates for the full capacity and operational capabilities of the combined storage facilities for its storage and wheeling services.”²² The Commission required Spire Storage to notify the Commission if future changes in circumstances significantly affect its market power status, including if Spire Storage adds storage capacity beyond the capacity authorized.²³

Spire Storage is increasing its working gas capacity and its injection and withdrawal capacities which, in turn, will allow for increased receipt capacity from and delivery capacity to interconnected pipelines. The Project therefore will result in a change in circumstances affecting the Commission’s prior analysis of market power for Spire Storage, and Spire Storage requests the Commission reaffirm Spire Storage’s authorization to charge market-based rates following the completion of the Project. Specifically, Spire Storage will increase the working gas capacity of the Clear Creek Storage Field from 4.0 Bcf to 20.0 Bcf and increase the injection and withdrawal capacities at the Clear Creek Storage Field from 35 MMcf/day to 350 MMcf/day and from 50 MMcf/day to 500 MMcf/day, respectively. These increases will result in the Spire Storage integrated facility having a total working gas capacity of 55 Bcf, a total maximum injection capacity

²² *Spire Storage West LLC, et al.*, 166 FERC ¶ 62,038 at pp. 64,135-64,136 (2019).

²³ *Id.* at p. 64,136.

of 700 MMcf/day, and total maximum withdrawal capacity of 980 MMcf/day. While these capacities will change as a result of the Project, as further set forth below, the firm and interruptible storage services and interruptible wheeling service offered by Spire Storage after the Project will be the same as the firm and interruptible storage and interruptible wheeling services that are currently provided by Spire Storage. In addition, Spire Storage is not establishing interconnections with any pipelines with which it is not already connected.²⁴

In support of its Application and request for reaffirmation of market-based rate authorization, Spire Storage is including herewith the prepared testimony and analysis of Mr. Toby Bishop (the “Market Power Study”), which provides updated market power analyses demonstrating that, with the changes to working gas capacity and receipt and delivery capacity, Spire Storage will be unable to exercise market power if granted the authority to continue to use market-based rates for purposes of its firm and interruptible storage services.²⁵

As demonstrated in the Market Power Study, the requested increase in working gas capacity and the increase in receipt and delivery capacity of the Project will not alter the Commission’s previous determination that Spire Storage will not have market power for storage or hub services in the relevant geographic market. Following the Project, Spire Storage will have a market share of total working gas capacity of just 3% and a market share of maximum daily deliverability of only 5.8% in the relevant geographic market.²⁶

²⁴ As explained in Resource Report 1 in Exhibit F-I, Spire Storage will be re-establishing the connection with Questar Pipeline at the Clear Creek Plant. Spire Storage also has an existing connection to Questar Pipeline through the Canyon Creek Plant. Since Spire Storage is not interconnecting with any new pipelines, no modifications to gas quality will be required.

²⁵ See Exhibit I at pp. 7-9.

²⁶ See *id.* at p. 7, Appendix C.

As further set forth in the Market Power Study, the HHI levels for working gas capacity and maximum daily deliverability in the relevant geographic market will be 770 and 576, respectively.²⁷ In light of the relatively low market shares and the low HHI values, Mr. Bishop concludes in the Market Power Study that Spire Storage would continue to be unable to exercise market power as to firm or interruptible storage services, either acting alone or in combination with others. Mr. Bishop also identifies a number of other factors that further mitigate the potential for Spire Storage to exercise market power, including the relative ease of entry into the relevant market, Spire Storage's connections to non-affiliated interstate natural gas pipelines, the availability of alternatives to storage in the relevant market, and the fact that a significant amount of the storage available in the relevant market is provided at cost-based rates regulated by the Commission.²⁸

With respect to interruptible wheeling services, the Project will not modify the pipelines to which Spire Storage interconnects, and the "bingo card" analysis remains completely filled in and unchanged by the Project.²⁹ In addition, the Market Power Study demonstrates that following the Project, Spire Storage would have a market share of only 6.0% for receipt capacity and a market share of only 5.5% for delivery capacity for pipeline interconnections in the relevant geographic market.³⁰ In addition, the pipelines directly and indirectly interconnected to Spire Storage are also interconnected with each other in numerous other locations in the relevant geographic market, providing alternative interconnections on which shippers can rely and that provide over 15 times the amount of receipt and delivery capability that Spire Storage will have to provide wheeling service.³¹

²⁷ See *id.* at p. 7.

²⁸ See *id.* at pp. 8, 17-18.

²⁹ See *id.* at p. 21, Appx. F.

³⁰ See *id.* at pp. 8, 22.

³¹ See *id.* at pp. 8-9, 22-23.

While the HHI levels indicate relatively concentrated markets for receipt capacity and delivery capacity in the relevant geographic market, with HHIs of 2,720 and 2,814 for receipt capacity and delivery capacity respectively, the market concentration is driven by two large corporate entities that each own or have an ownership interest in five different pipelines in the geographic market.³² As explained by Mr. Bishop, “the vast majority of the receipt and delivery capability” to provide wheeling services competing with Spire Storage is “owned by interstate pipelines ... all of which are subject to an obligation to provide services on an open-access basis at cost-based rates,” reducing the opportunity for Spire Storage to work with other market participants to exert market power for wheeling services.³³ Thus, in light of the relatively low market shares of Spire Storage and other limitations on the ability of Spire Storage to work in conjunction with other participants in the market to exercise market power in providing wheeling services,³⁴ Spire Storage would continue to be unable to exercise market power as to wheeling services following completion of the Project.

Consistent with the Commission’s prior analyses and authorization,³⁵ and for the reasons set forth in Mr. Bishop’s testimony in Exhibit I, Spire Storage respectfully requests the Commission rely upon the analyses in the Market Power Study and reaffirm Spire Storage’s authorization to charge market-based rates for hub services as well as firm and interruptible storage services. Spire Storage further requests continuation of waivers

³² *See id.* at p. 23.

³³ *Id.*

³⁴ *See id.* at pp. 24-25 (noting the level of interconnectedness between pipelines in the geographic area; the presence of numerous local distribution companies, producers, and marketers; the ability of pipelines to provide wheeling service via displacement; and the relatively low barriers to entry for parties to compete with Spire Storage).

³⁵ *Spire Storage West, LLC, et al.*, 166 FERC ¶ 62,038 at p. 64,135 (2019); *see also* Exhibit I at pp. 7-8, 22-25.

previously granted to Spire Storage and typically granted to other market-based rate storage providers, including waiver of the following sections of the Commission's regulations: Section 157.6(b)(8) (submission of cost and revenue data); Section 157.20(c)(3) (post-construction cost data); Sections 157.14(a)(13), (14), (16), and (17) (exhibits relevant to cost-based rates); Part 201 (accounting and reporting requirements) and Sections 260.1 and 260.2 (related to cost-of-service rate structure, Form 2, and Form 2-A, except for information necessary for assessment of annual charges); Section 260.300 (quarterly financial reporting); Sections 284.10, 284.7(d), and 284.7(e) (segmentation and straight fixed-variable rate design methodology); and Section 157.14(a)(11) (total gas supply data).³⁶

VII. OPEN SEASON

In order to evaluate market interest in the capacity to be offered by the Clear Creek Expansion Project, Spire Storage held a non-binding open season from August 5 through September 4, 2020. The open season materials are included herewith in Exhibit Z-1. In the open season, Spire Storage solicited interest from market participants for up to 16 Bcf of incremental firm gas storage capacity at the Spire Storage facility (the difference between the proposed 20 Bcf of working gas capacity at the Clear Creek Storage Field and the currently certificated 4.0 Bcf of working gas capacity), with contract terms commencing as early as April 1, 2022. Spire Storage received responses from 15 market participants, expressing interest in a total of 24 Bcf of incremental storage capacity, well in excess of the 16 Bcf of incremental storage capacity proposed for the Project.

³⁶ See, e.g., *Spire Storage West, LLC, et al.*, 166 FERC ¶ 62,038 at p. 64,136 (2019) (granting waivers set forth therein, subject to revision in the event the Commission finds cause to review Spire Storage's market power or market-based rates); *D'Lo Gas Storage*, 140 FERC ¶ 61,182 at PP 41-44, 59-60 (2012) (granting waivers of requirements not applicable to market-based rate storage providers).

VIII. EXHIBITS

This is an abbreviated application filed pursuant to Section 157.7 of the Commission's regulations,³⁷ pursuant to which Spire Storage has omitted the exhibits and data that are inapplicable or are unnecessary to disclose fully the nature and extent of the proposal herein. A list of the exhibits and documents filed with this Application, which are incorporated by reference as set forth fully herein, or which have been omitted for the reasons set forth below, is as follows:

- | | |
|-------------|--|
| Exhibit A | <u>Articles of Incorporation</u> Attached. |
| Exhibit B | <u>State Authorization</u> Attached. |
| Exhibit C | <u>Company Officials</u> Attached. |
| Exhibit D | <u>Subsidiaries and Affiliates</u> Attached. |
| Exhibit E | <u>Other Pending Applications and Filings</u> Omitted. As explained in Section IX of this Application, there are no other related applications. |
| Exhibit F | <u>Location of Facilities</u> Attached. |
| Exhibit F-I | <u>Environmental Report</u> |

³⁷ 18 C.F.R. § 157.7.

Attached hereto in Volumes I through III.

- Volume I contains the public version of Exhibit F-I.
- Volume II contains the privileged and confidential information and is comprised of all or a portion of Exhibit F-I, Appendix D-3, Appendix E, Appendix H, and Appendix J, and is labeled “**CUI//PRIV**” and “**Contains Privileged Information – Do Not Release.**”
- Volume III contains critical energy information and is comprised of all or a portion of Exhibit F-I, Appendix B-1, Appendix B-2, Appendix C, Appendix D-5, Appendix D-6, Appendix K-3, and Appendix L-2, as well as Exhibits G through G-II and is labeled “**CUI//CEII**” and “**Contains Critical Energy Infrastructure Information – Do Not Release.**”

Exhibits G
through G-II

Flow Diagrams and Flow Diagram Data

Attached hereto in Volume III and labeled “**CUI//CEII**” and “**Contains Critical Energy Infrastructure Information – Do Not Release.**”

Exhibit H

Total Gas Supply

Omitted. Not applicable.

Exhibit I

Market Data

Attached.

Exhibit J

Other Federal Authorizations

Attached.

Exhibit K

Cost of Facilities

Omitted. A detailed summary of the costs of the Clear Creek Expansion Project is omitted as the Commission recently reaffirmed Spire Storage’s authority to charge market-based rates in Docket No. CP18-520-000, and as set forth in Section VI of this Application and Exhibit I included herewith, Spire Storage continues to satisfy the Commission’s requirements for market-based rate authorization for the full capacity and operational capabilities of the Spire Storage facilities and services. However, Spire Storage states that the total cost of the

Project as proposed herein is estimated to be approximately \$243,800,000.00.

| | | |
|-------------|---|--|
| Exhibit L | <u>Financing</u> | Omitted. Not applicable given market-based rate authority. |
| Exhibit M | <u>Construction, Operation, and Maintenance</u> | Attached. |
| Exhibit N | <u>Revenues, Expenses, and Income</u> | Omitted. Not applicable given market-based rate authority. |
| Exhibit O | <u>Depreciation and Depletion</u> | Omitted. Not applicable given market-based rate authority. |
| Exhibit P | <u>Tariff and Rates</u> | Omitted. |
| Exhibit Z-1 | <u>Open Season Materials</u> | Attached. |
| Exhibit Z-2 | <u>Form of Protective Agreement</u> | Attached. |

IX. OTHER APPLICATIONS

Spire Storage knows of no other applications pending or required before the Commission under the NGA for the proposals contained herein.

X. LANDOWNER NOTIFICATION

Spire Storage will comply with the landowner notification requirements set forth in Section 157.6(d) of the Commission's regulations. Notice will be provided within three business days of following the date the Commission issues a notice of this Application. Spire Storage is including in Appendix E to Exhibit F-I a list of all affected landowners

known to it at this time. Appendix E is included in Volume II to this Application and is marked “**Contains Privileged Information—Do Not Release**” and “**CUI//PRIV**” and should not be released to the public. Spire Storage has been in communication with all federal, state, and private landowners directly impacted by or abutting the Project, and will continue to work with the landowners as needed throughout the Project. Spire Storage does not anticipate needing to utilize eminent domain for any portion of the Project.

XI. NOTICE

Spire Storage has attached a form of Notice suitable for publication in the *Federal Register* hereto.

XII. OTHER

In accordance with Section 157.6(c) of the Commission’s regulations,³⁸ Spire Storage requests that the Commission grant this Application in accordance with the shortened procedures set forth in Rules 801 and 802 of the Commission’s Rules of Practice and Procedure.³⁹ If the Commission utilizes the shortened procedures, Spire Storage requests that the intermediate decision procedure required by Rules 801 and 802 be omitted. If this Application is heard under the shortened procedures as set forth in Sections 157.6(c), 385.801, and 385.802 of the Commission’s regulations, Spire Storage hereby requests that the intermediate decision be omitted and waives oral hearing and the opportunity for filing exceptions to the decision of the Commission, but reserves its right to apply to the Commission for rehearing and to petition for judicial review of the Commission’s decision.

³⁸ 18 C.F.R. § 157.6(c).

³⁹ 18 C.F.R. §§ 385.801, 385.802.

Spire Storage is marking Volume III as Critical Energy Infrastructure Information (“CEII”) because it contains specific engineering, vulnerability, and detailed design information that could be useful to a person in planning an attack on critical infrastructure. Spire Storage requests that this information be treated as CEII for five years, unless re-designated by the CEII Coordinator.

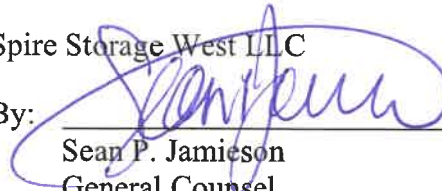
**XIII.
CONCLUSION**

Spire Storage respectfully requests that the Commission issue an order on or before September 1, 2021, (i) authorizing the activities requested in this Application, including construction of the Project facilities and increases in the working gas, base gas, injection, and withdrawal capacities, as set forth herein, with facilities to be placed into service on or before November 1, 2024; (ii) reaffirming Spire Storage’s authorization to charge market-based rates for firm and interruptible storage and hub services at the Spire Storage Facility, and (iii) granting related authorizations and waivers, as requested herein, and any other such waiver, authority and further relief as may be necessary in order to grant the authorizations and implement the proposal requested herein.

Respectfully submitted,

Spire Storage West LLC

By: _____


Sean P. Jamieson
General Counsel


Dated: October 9, 2020

VERIFICATION

THE STATE OF TEXAS)
)
COUNTY OF HARRIS)

Sean P. Jamieson, being first duly sworn, states that he is General Counsel of Spire Storage West LLC; that he is authorized to execute this Verification; that he has read the following Notice and is familiar with the contents thereof; that the proposed activities described in the Notice comply with the requirements of Part 157, Subpart F of the Federal Energy Regulatory Commission’s regulations; that in accordance with Rule 2011(c)(5) of the Commission’s Rules of Practice and Procedure, 18 C.F.R. § 385.2011(c)(5) (2019), he has read the paper copy of the filing and is familiar with the contents thereof; that the paper copies contain the same information as the electronic version; that all allegations of fact therein contained are true and correct to the best of his knowledge and belief.

SPIRE STORAGE WEST LLC



Sean P. Jamieson
General Counsel

Subscribed and sworn to before me this 18th day of September, 2020.



Notary Public, State of Texas

My Commission Expires: 06/14/23



UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C.

Spire Storage West LLC

)

Docket No. CP21-____-000

NOTICE OF ABBREVIATED APPLICATION
FOR AMENDMENT TO
CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY
(October __, 2020)

Take notice that on October 9, 2020, Spire Storage West LLC (“Spire Storage”) filed with the Federal Energy Regulatory Commission (“FERC” or “Commission”) an Abbreviated Application for an Amendment of Certificate of Public Convenience and Necessity, Reaffirmation of Market-Based Rate Authority, and Related Authorizations (“Application”) pursuant to Section 7(c) of the Natural Gas Act and Part 157 of the Commission’s regulations and the certificate and authorizations issued by the Commission in Docket Nos. CP98-256-000 and CP11-24-000. In the Application, Spire Storage requests (i) an amendment of the certificate of public convenience and necessity issued by the Commission on September 1, 1998, in Docket No. CP98-256-000, for Spire Storage’s Clear Creek Storage Field in Uinta County, Wyoming, (ii) reaffirmation of market-based rate authority, and (iii) related authorizations and waivers, as requested herein, and any other such waiver, authority and further relief as may be necessary in order to grant the authorizations requested.

As described more fully in the Application, Spire Storage is seeking authorization to expand its natural gas storage facilities at the Clear Creek Storage Field in Uinta County, Wyoming, including the installation of four compressor units and related processing equipment at the Clear Creek central gas processing plant (“Clear Creek Plant”); relocation, replacement, and installation of existing and new natural gas liquids, condensate, fuel, supply oil, and produced water tanks as well as associated truck load-out facilities at the Clear Creek Plant; expansion of Clear Creek well facilities through the drilling and installation of 11 new injection/withdrawal wells and one new water disposal well on existing well pads in the Clear Creek Storage Field, with construction of associated gathering pipelines; and construction of a total of approximately 10.6 miles of pipeline to transport natural gas between the Canyon Creek compressor station, the Clear Creek Plant, and a new interconnection with the Kern River Gas Transmission mainline (the “Sagebrush Pipeline”). Spire Storage also requests authorization to increase the total site-rated compression at the Clear Creek Plant from 3,740 horsepower (“hp”) to 24,340 hp; increase the working gas and base gas capacity of the Clear Creek Storage Field from 4.0 billion cubic feet (“Bcf”) each to 20.0 Bcf each; increase the injection and withdrawal capacities at the Clear Creek Storage Field from 35 million cubic feet per day (“MMcf/day”) and 50 MMcf/day, respectively, to 350 MMcf/day and 500 MMcf/day, respectively; and establish a buffer zone for the Clear Creek Storage Field extending one-quarter mile around the reservoir. Additionally, Spire Storage requests reaffirmation of its authorization to charge market-based rates for firm and interruptible storage and hub services.

Any questions concerning this Notice may be directed to: Sean P. Jamieson, General Counsel, Spire Storage West LLC, 3773 Richmond Ave., Suite 300, Houston, Texas, 77046, Phone: (346) 308-7555, Email: StorageLegal@spireenergy.com.

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

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

This filing is accessible on-line at <http://www.ferc.gov>, using the "eLibrary" link and is available for review in the Commission's Public Reference Room in Washington, DC. There is an "eSubscription" link on the web site that enables subscribers to receive email notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please email FERCOnlineSupport@ferc.gov, or call (866) 208-3676 (toll free). For TTY, call (202) 502-8659.

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

Kimberly D. Bose,
Secretary



Spire Storage West LLC
Clear Creek Expansion Project
Docket No. CP21-____-000
Exhibit A

**SPIRE STORAGE WEST LLC
CLEAR CREEK EXPANSION PROJECT**

EXHIBIT A

**CERTIFICATES OF FORMATION AND AMENDMENT AND AMENDED
AND RESTATED LIMITED LIABILITY COMPANY AGREEMENT**

STATE OF WYOMING
Office of the Secretary of State

I, EDWARD A. BUCHANAN, SECRETARY OF STATE of the STATE OF WYOMING, do hereby certify that according to the records of this office,

Spire Storage West LLC
is a
Limited Liability Company

formed or qualified under the laws of Delaware did on **September 9, 2009**, comply with all applicable requirements of this office. Its period of duration is Perpetual. This entity has been assigned entity identification number **2009-000574426**.

This entity is in existence and in good standing in this office and has filed all annual reports and paid all annual license taxes to date, or is not yet required to file such annual reports; and has not filed an Application for Certificate of Withdrawal.

I have affixed hereto the Great Seal of the State of Wyoming and duly generated, executed, authenticated, issued, delivered and communicated this official certificate at Cheyenne, Wyoming on this 20th day of March, 2019 at 12:05 PM. This certificate is assigned 030355422.




Secretary of State

Notice: A certificate issued electronically from the Wyoming Secretary of State's web site is immediately valid and effective. The validity of a certificate may be established by viewing the Certificate Confirmation screen of the Secretary of State's website <http://wyobiz.wy.gov> and following the instructions displayed under Validate Certificate.

State of Delaware
Secretary of State
Division of Corporations
Delivered 04:00 PM 05/01/2018
FILED 04:00 PM 05/01/2018
SR 20183228136 - File Number 4726737

**STATE OF DELAWARE
CERTIFICATE OF AMENDMENT
OF**

Ryckman Creek Resources, LLC

1. Name of Limited Liability Company: Ryckman Creek Resources, LLC
2. The Certificate of Formation of the limited liability company is hereby amended as follows: The name of the Limited Liability Company is being changed to:
Spire Storage West LLC

[set forth amendment(s)]

IN WITNESS WHEREOF, the undersigned have executed this Certificate on the 30th day of April, A.D. 2018.

By: Ellen L. Theroff
Authorized Person(s)

Ellen L. Theroff for Belle Butte LLC, Manager
Name: _____

Print or Type

State of Delaware
Certificate of Merger of a Foreign Limited Liability Company
into a Domestic Limited Liability Company

Pursuant to Title 6, Section 18-209 of the Delaware Limited Liability Company Act.

First: The name of the surviving Limited Liability Company is Spire Storage
West LLC, a Delaware Limited Liability Company.

Second: The name of the Limited Liability Company being merged into this surviving
Limited Liability Company is Clear Creek Storage Company, L.L.C.
The jurisdiction in which this Limited Liability Company was formed is Utah.

Third: The Agreement of Merger has been approved and executed by both Limited
Liability Companies.

Fourth: The name of the surviving Limited Liability Company is Spire Storage
West LLC.

Fifth: The executed agreement of merger is on file at 700 Market Street
St. Louis, Missouri 63101,
the principal place of business of the surviving Limited Liability Company.

Sixth: A copy of the agreement of merger will be furnished by the surviving Limited
Liability Company on request, without cost, to any member of the Limited Liability
Company or any person holding an interest in any other business entity which is to merge
or consolidate.

IN WITNESS WHEREOF, said Limited Liability Company has caused this certificate
to be signed by an authorized person, this 25th day of January, A.D., 2019.

By: Ellen L. Theroff
Authorized Person

Name: Ellen L. Theroff
Print or Type

STATE OF WYOMING
Office of the Secretary of State

I, EDWARD A. BUCHANAN, Secretary of State of the State of Wyoming, do hereby certify that the filing requirements for the issuance of this certificate have been fulfilled.

CERTIFICATE OF NAME CHANGE

Current Name: Spire Storage West LLC
Old Name: Ryckman Creek Resources, LLC

I have affixed hereto the Great Seal of the State of Wyoming and duly executed this official certificate at Cheyenne, Wyoming on this **30th** day of **May, 2018**



Filed Date: 05/30/2018

Edward A. Buchanan

Secretary of State

By: Cristina Castillo

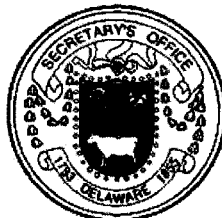
Delaware

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE CERTIFICATE OF MERGER WHICH MERGES:

"CLEAR CREEK STORAGE COMPANY, L.L.C.", AN UTAH CORPORATION, WITH AND INTO "SPIRE STORAGE WEST LLC" UNDER THE NAME OF "SPIRE STORAGE WEST LLC", A LIMITED LIABILITY COMPANY ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF DELAWARE, WAS RECEIVED AND FILED IN THIS OFFICE THE FOURTH DAY OF FEBRUARY, A.D. 2019, AT 1:15 O`CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE AFORESAID LIMITED LIABILITY COMPANY SHALL BE GOVERNED BY THE LAWS OF THE STATE OF DELAWARE.



Jeffrey W. Bullock
Jeffrey W. Bullock, Secretary of State

4726737 8330
SR# 20193419512

Authentication: 202746683
Date: 05-01-19

STATE OF WYOMING
Office of the Secretary of State

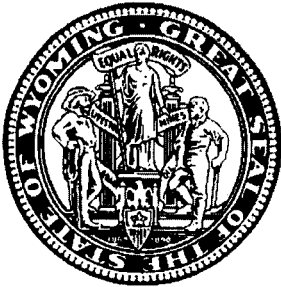
I, EDWARD A. BUCHANAN, Secretary of State of the State of Wyoming, do hereby certify that the filing requirements for the issuance of this certificate have been fulfilled.

CERTIFICATE OF MERGER

Clear Creek Storage Company, L.L.C. (Utah) (Qualified Non-survivor)

Merged into Spire Storage West LLC (Delaware) (Qualified Survivor)

I have affixed hereto the Great Seal of the State of Wyoming and duly executed this official certificate at Cheyenne, Wyoming on this **10th** day of **June**, 2019.



Filed Date: 06/10/2019

Edward A. Buchanan
Secretary of State

By: _____ Kit Nelson _____

FAX No. **SP**

Date: 01/31/2019
Receipt Number: 7698325
Amount Paid: \$112.00

2040548-0160
Merged into UQ



State of Utah
DEPARTMENT OF COMMERCE
Division of Organizations & Commercial Code
Statement/Articles of Merger

This form cannot be hand written.

MERGER

RECEIVED

JAN 31 2019

Utah Div. of Corp. & Comm. Code

Non-Refundable Processing Fee: \$37.00

EXPEDITE

Surviving Entity

Name of Business Entity: Spire Storage West LLC

Entity Type: Limited Liability Company Jurisdiction: Delaware

Mailing Address for Service of Process pursuant to Subsection 16-17-301(2)
(for Non-registered Foreign Surviving Entities **ONLY**)

Address: 919 North Market Street, Suite 950

City: Wilmington State: DE Zip: 19801

Surviving Entity Creation/Existence

- The surviving entity is created by this Statement of Merger. The formation document that creates the surviving entity is attached (for Domestic LLCs, LPs, LLPs, or LLLPs only).
- The surviving entity is a Non-registered Foreign Entity.
- The surviving entity existed before this Statement/Articles of Merger.

Pursuant to Utah code the undersigned parties of the merger execute and deliver the following Statement of Merger:

Non-surviving Entities that are Parties to the Merger:

Name of Business Entity: Clear Creek Storage Company, L.L.C.

Entity Type: Limited Liability Company Jurisdiction: Utah

Name of Business Entity: _____

Entity Type: _____ Jurisdiction: _____

Name of Business Entity: _____

Entity Type: _____ Jurisdiction: _____

Name of Business Entity: _____

Entity Type: _____ Jurisdiction: _____

Name of Business Entity: _____

Entity Type: _____ Jurisdiction: _____

Additional Business Entities that are Parties to the Merger have been named in an attached Exhibit and made a part hereof

The delayed effective date of the merger described herein shall be the date upon which this document is filed with the Utah Division of Corporations and Commercial Code, or _____

JAN 31 '19 AM 11:54

State of Utah
Department of Commerce
Division of Corporations and Commercial Code
I hereby certified that the foregoing has been filed
and approved on this 31 day of JAN, 2019
in this office of this Division and hereby issued
This Certificate thereof.

TMM

Examiner _____ Date 2/1/19



Jason Sterzer
Jason Sterzer
Division Director

Plan of Merger or Share Exchange

The Plan of Merger or Share Exchange, containing such information as required by Utah Code 16-10a-1101, is set forth in "Exhibit A," attached hereto and made a part hereof.

Manner of Adoption & Vote of Surviving Corporation (must complete Section 1 or 2)

Section 1

Shareholder vote not required. The merger/ share exchange was adopted by the incorporators or board of directors without shareholder action and shareholder action was not required.

Section 2

Vote of shareholders (complete either A or B) The designation (i.e., common, preferred or any classification where different classes of stock exist), number of outstanding shares, number of votes entitled to be cast by each voting group entitled to vote separately on the merger / share exchange and the number of votes of each voting group represented at the meeting is set forth below:

A. Unanimous written consent executed on _____, 20__ and signed by all shareholders entitled to vote.

B. Vote of shareholders during a meeting called by the Board of Directors.

| | TOTAL | A | B | C |
|--|-------|---|---|---|
| Designation of each voting group (i.e. preferred and common) | | | | |
| Number of outstanding shares | | | | |
| Number of votes entitled to be cast | | | | |
| Number of votes represented at meeting | | | | |
| Shares voted in favor | | | | |
| Shares voted against | | | | |

Manner of Adoption & Vote of Non-surviving Corporation (must complete Section 1 or 2)

Section 1

Shareholder vote not required. The merger/ share exchange was adopted by the incorporators or board of directors without shareholder action and shareholder action was not required.

Section 2

Vote of shareholders (complete either A or B) The designation (i.e., common, preferred or any classification where different classes of stock exist), number of outstanding shares, number of votes entitled to be cast by each voting group entitled to vote separately on the merger / share exchange and the number of votes of each voting group represented at the meeting is set forth below:

A. Unanimous written consent executed on _____, 20__ and signed by all shareholders entitled to vote.

B. Vote of shareholders during a meeting called by the Board of Directors.

| | TOTAL A | | B | C |
|--|---------|--|---|---|
| Designation of each voting group (i.e. preferred and common) | | | | |
| Number of outstanding shares | | | | |
| Number of votes entitled to be cast | | | | |
| Number of votes represented at meeting | | | | |
| Shares voted in favor | | | | |
| Shares voted against | | | | |

Approval Statement

This merger was approved by each domestic merging entity (if any) in accordance with Sections 48-3a-1021 through 48-3a-1026 and by each foreign merging entity (if any) in accordance with the law of its jurisdiction of formation.

JAN 31 '19 AM 11:54

Required Signatures

Surviving Entity: Spire Storage West LLC

Name: Ellen L. Theroff Title: Corporate Secretary

Signature: *Ellen L. Theroff* Date: January 25, 2019

Non-surviving Entity: Clear Creek Storage Company, L.L.C.

Name: Ellen L. Theroff Title: Corporate Secretary

Signature: *Ellen L. Theroff* Date: January 25, 2019

Non-surviving Entity: _____

Name: _____ Title: _____

Signature: _____ Date: _____

Non-surviving Entity: _____

Name: _____ Title: _____

Signature: _____ Date: _____

Non-surviving Entity: _____

Name: _____ Title: _____

Signature: _____ Date: _____

Non-surviving Entity: _____

Name: _____ Title: _____

Signature: _____ Date: _____

Include complete signatures for any additional Business Entities that have been named in an attached Exhibit.

Under GRAMA (63-2-201), all registration information maintained by the Division is classified as public record. For confidentiality purposes, you may use the business entity physical address rather than the residential or private address of any individual affiliated with the entity.

JAN 31 '19 AM 11:54

AGREEMENT AND PLAN OF MERGER

This AGREEMENT AND PLAN OF MERGER (hereinafter called this "Agreement"), dated as of January 25, 2019, is entered into between Spire Storage West LLC, a limited liability company organized in the State of Delaware (the "Company"), and Clear Creek Storage Company, L.L.C., a Utah limited liability company and a wholly owned subsidiary of the Company ("Subsidiary").

RECITALS

WHEREAS, the sole member of each of the Company and Subsidiary deem it advisable, upon the terms and subject to the conditions herein stated, that the Subsidiary be merged with and into Company, and that Company be the surviving entity (the "Merger"); and

NOW, THEREFORE, in consideration of the premises and of the agreements of the parties hereto contained herein, the parties hereto agree as follows:

ARTICLE I

THE MERGER; EFFECTIVE TIME

1.1 The Merger. Upon the terms set forth in this Agreement, at the Effective Time (as defined in Section 1.2), the Subsidiary shall be merged with and into Company whereupon the separate existence of the Subsidiary shall cease. Company shall be the surviving entity (sometimes hereinafter referred to as the "Surviving Entity") in the Merger and shall continue to be governed by the laws of the State of Delaware. The Merger shall have the effects specified in the Limited Liability Company Act of the State of Delaware, as amended (the "DLCA"), and in the Utah Revised Uniform Limited Liability Company Act, as amended (the "ULLCA"), and the Surviving Entity shall succeed, without other transfer, to all of the assets and property (whether real, personal or mixed), rights, privileges, franchises, immunities and powers of the Subsidiary, and shall assume and be subject to all of the duties, liabilities, obligations and restrictions of every kind and description of the Subsidiary, including, without limitation, all outstanding indebtedness of the Subsidiary.

1.2 Effective Time. On the date of this Agreement, the Company and Subsidiary shall cause a Plan of Merger or a Statement of Merger to be executed and filed with the Secretary of State of Utah (the "Utah Plan of Merger"), and a Certificate of Merger to be executed and filed with the Secretary of State of Delaware (the "Delaware Certificate of Merger"). The Merger shall become effective upon the date and time specified in the Utah Plan of Merger and the Delaware Certificate of Merger (the "Effective Time").

ARTICLE II

OPERATING AGREEMENT OF THE SURVIVING ENTITY

2.1 The Operating Agreement. The operating agreement of Company in effect at the Effective Time shall be the operating agreement of the Surviving Entity, unless and until amended in accordance with the provisions provided therein or applicable law.

JAN 31 '19 AM 11:54

ARTICLE III
SOLE MEMBER OF THE SURVIVING LIMITED LIABILITY COMPANY

3.1 Sole Member. The Sole Member of the Company at the Effective Time shall, from and after the Effective Time, be the Sole Member of the Surviving Limited Liability Company, until its successor has been duly elected or appointed and qualified.

ARTICLE IV
MISCELLANEOUS AND GENERAL

4.1 Modification or Amendment. Subject to the provisions of applicable law, at any time prior to the Effective Time, the parties hereto may modify or amend this Agreement.

4.2 Counterparts. This Agreement may be executed in any number of counterparts, each such counterpart being deemed to be an original instrument, and all such counterparts shall together constitute the same agreement.

4.3 Governing Law. This Agreement shall be deemed to be made in, and in all respects shall be interpreted, construed and governed by and in, accordance with the law of the state of Delaware without regard to the conflict of law principles thereof.

4.4 Entire Agreement. This Agreement constitutes the entire agreement and supersedes all other prior agreements, understandings, representations and warranties both written and oral, among the parties, with respect to the subject matter hereof.

4.5 No Third-Party Beneficiaries. This Agreement is not intended to confer upon any person other than the parties hereto any rights or remedies hereunder.

4.6 Severability. The provisions of this Agreement shall be deemed severable and the invalidity or unenforceability of any provision shall not affect the validity or enforceability of the other provisions hereof. If any provision of this Agreement, or the application thereof to any person or any circumstance, is determined by any court or other authority of competent jurisdiction to be invalid or unenforceable, (a) a suitable and equitable provision shall be substituted therefor in order to carry out, so far as may be valid and enforceable, the intent and purpose of such invalid or unenforceable provision and (b) the remainder of this Agreement and the application of such provision to other persons or circumstances shall not be affected by such invalidity or unenforceability, nor shall such invalidity or unenforceability affect the validity or enforceability of such provision, or the application thereof, in any other jurisdiction.

4.7 Headings. The headings therein are for convenience of reference only, do not constitute part of this Agreement and shall not be deemed to limit or otherwise affect any of the provisions hereof.

[SIGNATURES ON NEXT PAGE]

JAN 31 '19 AM 11:54

IN WITNESS WHEREOF, this Agreement has been duly executed and delivered by the duly authorized officers of the parties hereto as of the date first written above.

SPIRE STORAGE WEST LLC

By: Michael C. Geiselhart
Name: Michael C. Geiselhart
Title: President

CLEAR CREEK STORAGE COMPANY, L.L.C.

By: Michael C. Geiselhart
Name: Michael C. Geiselhart
Title: President

[https://corpfiles.delaware.gov/Cert%20-%20For%20LLC%20-%20DE%20LLC\(Surv\)09.pdf](https://corpfiles.delaware.gov/Cert%20-%20For%20LLC%20-%20DE%20LLC(Surv)09.pdf)

https://le.utah.gov/xcode/Title48/Chapter3A/48-3a-P10.html?v=C48-3a-P10_1800010118000101

JAN 31 '19 AM 11:54

AMENDED AND RESTATED LIMITED LIABILITY COMPANY AGREEMENT

OF

RYCKMAN CREEK RESOURCES, LLC

dated as of December 27, 2017

THE SECURITIES REPRESENTED BY THIS AGREEMENT HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED OR UNDER THE SECURITIES LAW OF ANY STATE. SUCH SECURITIES MAY NOT BE SOLD, PLEDGED, HYPOTHECATED, TRANSFERRED, OR OTHERWISE DISPOSED OF UNLESS SUBSEQUENTLY REGISTERED OR UNLESS AN EXEMPTION FROM REGISTRATION IS AVAILABLE.

TABLE OF CONTENTS

| <u>Section</u> | <u>Page</u> |
|---|-------------|
| ARTICLE 1 DEFINITIONS..... | 1 |
| ARTICLE 2 GENERAL..... | 12 |
| 2.1 Formation..... | 12 |
| 2.2 Principal Office..... | 12 |
| 2.3 Registered Office and Registered Agent..... | 13 |
| 2.4 Purpose of the Company..... | 13 |
| 2.5 Date of Dissolution..... | 13 |
| 2.6 Qualification..... | 13 |
| 2.7 Members..... | 13 |
| 2.8 Reliance by Third Parties..... | 13 |
| ARTICLE 3 CAPITALIZATION OF THE COMPANY..... | 14 |
| 3.1 Membership Interests..... | 14 |
| 3.2 Required Contributions..... | 14 |
| 3.3 Additional Capital Contributions; Adjustments to Class B Percentage Interests..... | 15 |
| 3.4 Loans..... | 16 |
| 3.5 Maintenance of Capital Accounts..... | 16 |
| 3.6 Capital Withdrawal Rights, Interest and Priority..... | 17 |
| 3.7 Determination of Fair Market Value..... | 17 |
| ARTICLE 4 DISTRIBUTIONS..... | 19 |
| 4.1 Distributions of Available Cash..... | 19 |
| 4.2 Persons Entitled to Distributions..... | 19 |
| 4.3 Limitations on Distributions..... | 19 |
| ARTICLE 5 ALLOCATIONS..... | 20 |
| 5.1 Profits..... | 20 |
| 5.2 Losses..... | 20 |
| 5.3 Regulatory Allocations..... | 20 |
| 5.4 Tax Allocations: Code Section 704(c)..... | 22 |
| 5.5 Change in Percentage Interests..... | 22 |
| 5.6 Withholding..... | 22 |
| ARTICLE 6 MEMBERS' MEETINGS..... | 23 |
| 6.1 Meetings of Members; Place of Meetings..... | 23 |
| 6.2 Quorum; Voting Requirement..... | 23 |

| | | |
|---|---|----|
| 6.3 | Action Without Meeting | 23 |
| 6.4 | Notice | 24 |
| 6.5 | Waiver of Notice | 24 |
| ARTICLE 7 MANAGEMENT AND CONTROL | | 24 |
| 7.1 | Management | 24 |
| 7.2 | Officers | 24 |
| 7.3 | No Compensation of Manager | 25 |
| 7.4 | Matters Requiring Member Approval | 25 |
| ARTICLE 8 DUTIES; LIABILITY AND INDEMNIFICATION | | 25 |
| 8.1 | Duties of Managers and Members | 25 |
| 8.2 | Limitation on Liability of Officers | 27 |
| 8.3 | Indemnification. | 27 |
| ARTICLE 9 TRANSFERS OF MEMBERSHIP INTERESTS | | 28 |
| 9.1 | General | 28 |
| 9.2 | Substitute Members | 30 |
| 9.3 | Effect of Admission as a Substitute Member | 30 |
| 9.4 | Consent | 30 |
| 9.5 | No Dissolution | 30 |
| 9.6 | Additional Members | 31 |
| 9.7 | Right of First Refusal | 31 |
| 9.8 | Tag-Along Rights | 31 |
| 9.9 | Drag-Along Rights | 33 |
| 9.10 | Put Rights | 34 |
| 9.11 | Call Rights | 36 |
| 9.12 | Remedies | 37 |
| ARTICLE 10 DISSOLUTION AND TERMINATION | | 37 |
| 10.1 | Events Causing Dissolution. | 37 |
| 10.2 | Final Accounting | 37 |
| 10.3 | Distributions Following Dissolution and Termination. | 37 |
| 10.4 | Termination of the Company | 39 |
| 10.5 | No Action for Dissolution | 39 |
| ARTICLE 11 TAX MATTERS | | 39 |
| 11.1 | Tax Matters Member | 39 |
| 11.2 | Certain Authorizations | 40 |
| 11.3 | Indemnity of Tax Matters Member | 41 |
| 11.4 | Information Furnished | 41 |
| 11.5 | Notice of Proceedings, etc. | 41 |

| | | |
|--|--|----|
| 11.6 | Notices to Tax Matters Member | 41 |
| 11.7 | Preparation of Tax Returns | 42 |
| 11.8 | Tax Elections | 42 |
| 11.9 | Taxation as a Partnership | 42 |
| ARTICLE 12 ACCOUNTING AND BANK ACCOUNTS..... | | 42 |
| 12.1 | Fiscal Year and Accounting Method | 42 |
| 12.2 | Books and Records | 42 |
| 12.3 | Delivery to Members; Inspection..... | 43 |
| 12.4 | Financial Statements | 43 |
| 12.5 | Filings | 43 |
| 12.6 | Non-Disclosure | 43 |
| ARTICLE 13 MISCELLANEOUS | | 44 |
| 13.1 | Waiver of Default | 44 |
| 13.2 | Amendment..... | 44 |
| 13.3 | No Third Party Rights..... | 44 |
| 13.4 | Severability | 44 |
| 13.5 | Nature of Interest in the Company..... | 44 |
| 13.6 | Binding Agreement..... | 44 |
| 13.7 | Headings | 45 |
| 13.8 | Word Meanings..... | 45 |
| 13.9 | Counterparts | 45 |
| 13.10 | Entire Agreement..... | 45 |
| 13.11 | Partition..... | 45 |
| 13.12 | Governing Law; Consent to Jurisdiction and Venue | 45 |

Exhibits

Exhibit A - Business Plan

Schedules

Schedule 3.1 - Members, Capital Contributions and Percentage Interests

**AMENDED AND RESTATED
LIMITED LIABILITY COMPANY AGREEMENT
OF
RYCKMAN CREEK RESOURCES, LLC**

THIS AMENDED AND RESTATED LIMITED LIABILITY COMPANY AGREEMENT (this “*Agreement*”) of RYCKMAN CREEK RESOURCES, LLC, a Delaware limited liability company (the “*Company*”), is made and entered into as of the 27th day of December, 2017 (the “*Effective Date*”), by and among each of the Persons executing this Agreement on the signature pages hereto as a member (together with such other Persons that may hereafter become members as provided herein, but excluding any such Person who has ceased to be a member, referred to collectively as the “*Members*” or, individually, as a “*Member*”).

WHEREAS, the Company was previously formed by the original members of the Company on September 2, 2009 by the filing of the Certificate of Formation of the Company with the Secretary of State of Delaware (as amended or restated from time to time, the “*Certificate of Formation*”);

WHEREAS, immediately prior to the date hereof, the Company’s operations and governance were set forth in that certain Amended and Restated Limited Liability Company Agreement of the Company, dated October 28, 2011 (the “*Prior Agreement*”);

WHEREAS, pursuant to (a) that certain Plan Sponsor Agreement, dated December 13, 2017 (the “*Plan Sponsor Agreement*”), by and between the Company and Belle Butte LLC (the “*Plan Sponsor*”), and (b) the Reorganization Plan (as defined in the Plan Sponsor Agreement), all of the Units (as defined in the Prior Agreement) and any other equity interests in the Company were cancelled, and new equity in the Company was issued to the Members upon the Closing (as defined in the Plan Sponsor Agreement);

WHEREAS, it is a condition to the Closing (as defined in the Plan Sponsor Agreement) that the Members enter into this Agreement, which amends and restates the Prior Agreement in its entirety.

NOW, THEREFORE, in consideration of the premises and the mutual agreements contained herein, the Members hereby amend and restate the Prior Agreement in its entirety as set forth herein.

**ARTICLE 1
DEFINITIONS**

As used herein, the following terms shall have the following meanings, unless the context otherwise requires:

“*100% Tag Notice*” shall have the meaning set forth in Section 9.8(a).

“*100% Transfer Notice*” shall have the meaning set forth in Section 9.8(a).

“**Act**” means the Delaware Limited Liability Company Act, 6 Del. C. Section 18-101, et seq., as amended from time to time, and the provisions of succeeding law.

“**Additional Capital Contribution**” means any Capital Contribution requested of the Class B Members in accordance with the provisions of this Agreement, *provided* that, no Additional Capital Contribution shall be requested until all Required Contributions have been made to the Company pursuant to Section 3.3.

“**Additional Issued Interest**” means any Membership Interests, partnership interests, capital stock, or other equity interest in the Company (but excluding any Additional Percentage Interest) or any of its Subsidiaries or any other securities (including rights, warrants and options) convertible into, exchangeable for or exercisable for any of Membership Interests or partnership interests, capital stock, or other equity interests in the Company or any of its Subsidiaries, whether or not presently convertible, exchangeable or exercisable.

“**Additional Percentage Interest**” means any increase in (i) the Class A Percentage Interest of a Class A Member or (ii) the Class B Percentage Interest of a Class B Member, in each case in exchange for a Capital Contribution.

“**Adjusted Capital Account Deficit**” means, with respect to a Member, the deficit balance, if any, in such Member’s Capital Account as of the end of the relevant Fiscal Period, after giving effect to the following adjustments:

(a) Credit to such Capital Account any amounts which such Member is obligated to restore pursuant to any provision of this Agreement or by operation of law upon liquidation of such Member’s Membership Interest or is deemed to be obligated to restore pursuant to Regulations Sections 1.704-1(b)(2)(ii)(c), 1.704-2(g)(1) and 1.704-2(i)(5); and

(b) Debit to such Capital Account the items described in Regulations Sections 1.704-1(b)(2)(ii)(d)(4), 1.704-1(b)(2)(ii)(d)(5), and 1.704-1(b)(2)(ii)(d)(6).

The foregoing definition of “Adjusted Capital Account Deficit” is intended to comply with the provisions of Regulations Section 1.704-1(b)(2)(ii)(d) and shall be interpreted consistently therewith.

“**Affiliate**” means, with respect to any specified Person, any other Person that directly, or indirectly through one or more intermediaries, controls, is controlled by, or is under common control with, such specified Person. No Member or any of its Affiliates shall be deemed to be an Affiliate of the Company or any of its Subsidiaries for purposes of this Agreement.

“**Agreement**” shall have the meaning set forth in the preamble hereof, as the same may be amended from time to time in accordance with the terms hereof.

“**Appraiser**” shall have the meaning set forth in Section 3.7.

“**Authorized Representative**” shall have the meaning set forth in Section 6.1.

“**Available Cash**” means, with respect to a fiscal quarter, all cash and cash equivalents of the Company at the end of such quarter less the amount of cash reserves that is necessary or appropriate in the reasonable discretion of the Manager to (a) provide for the proper conduct of the business of the Company (including reserves for future capital expenditures and for anticipated future credit needs of the Company) subsequent to such quarter or (b) comply with applicable law or any loan agreement, security agreement, mortgage, debt instrument or other agreement or obligation to which the Company is a party or by which it is bound or its assets or Property is subject.

“**BBA Rules**” means Subchapter C of Chapter 63 of the Code (Sections 6221 et seq.) as enacted by the Bipartisan Budget Act of 2015, and any Regulations or other guidance promulgated thereunder, and any similar state or local legislation, regulations or guidance.

“**Business**” means the business of developing, owning, and operating a natural gas storage facility (the “**Facility**”) developed from a depleted crude oil and natural gas reservoir located approximately 25 miles southwest of the Opal Hub in Uinta County, Wyoming.

“**Business Day**” means any day that is not a Saturday, a Sunday or other day on which banks are required or authorized by law to be closed in the City of New York, NY.

“**Business Plan**” means the business plan for the Company approved by the Members and attached hereto as Exhibit A, as the same may be amended in the manner provided for herein.

“**Call Option**” shall have the meaning set forth in Section 9.11(a).

“**Call Option Notice**” shall have the meaning set forth in Section 9.11(b).

“**Call Price**” shall have the meaning set forth in Section 9.11(c).

“**Capital Account**” means, with respect to any Member, a separate account established by the Company and maintained for each Member in accordance with Section 3.5 hereof.

“**Capital Contribution**” means, with respect to any Member, the amount of money and the initial Gross Asset Value of any Property (other than money) contributed to the Company.

“**Certificate of Formation**” shall have the meaning set forth in the recitals.

“**Class A Member**” means a Member holding any Class A Membership Interest. The initial Class A Member as of the Effective Date is the Plan Sponsor, which holds 100% of all Class A Membership Interests.

“**Class A Membership Interest**” means a Membership Interest issued pursuant to Section 3.1(a) that entitles the Member holding such interest to receive the distributions of cash and other property, allocations of profits and losses and other rights that are accorded any Member holding a Class A Membership Interest under this Agreement.

“Class A Percentage Interest” means the aggregate percentage of Class A Membership Interests of each Class A Member executing this Agreement or a Person acquiring such Class A Member’s Class A Membership Interests in accordance with the provisions of this Agreement, in each case as set forth on Schedule 3.1; *provided*, that the total of all Class A Percentage Interests always shall equal 100%.

“Class B Majority in Interest” means Class B Members owning more than fifty percent (50%) of the total Class B Percentage Interests held by all Class B Members.

“Class B Member” means a Member holding any Class B Membership Interest.

“Class B Membership Interest” means a Membership Interest issued pursuant to Section 3.1(b) that entitles the Member holding such interest to receive the distributions of cash and other property, allocations of profits and losses and other rights that are accorded any Member holding a Class B Membership Interest under this Agreement.

“Class B Percentage Interest” means the aggregate percentage of Class B Membership Interests of each Class B Member executing this Agreement or a Person acquiring such Class B Member’s Class B Membership Interests in accordance with the provisions of this Agreement, in each case as set forth on Schedule 3.1; *provided*, that the total of all Class B Percentage Interests always shall equal 100%.

“Closing Date” shall have the meaning set forth in the Plan Sponsor Agreement.

“Code” means the United States Internal Revenue Code of 1986, as amended.

“Company” shall have the meaning set forth in the preamble hereof.

“Company Affiliate” shall have the meaning set forth in Section 8.3(a).

“Company Minimum Gain” shall have the same meaning as “partnership minimum gain” as set forth in Regulations Section 1.704-2(b)(2) and 1.704-2(d).

“Company Representative” shall have the meaning set forth in Article 11.

“Depreciation” means, for each Fiscal Period or other period, an amount equal to the federal income tax depreciation, amortization or other cost recovery deduction allowable under United States federal income tax principles with respect to an asset for such Fiscal Period, except that if the Gross Asset Value of an asset differs from its adjusted basis for federal income tax purposes at the beginning of such Fiscal Period, Depreciation shall be an amount which bears the same ratio to such beginning Gross Asset Value as the federal income tax depreciation, amortization or other cost recovery deduction for such Fiscal Period bears to such beginning adjusted tax basis (except as otherwise required by Regulations Section 1.704-3(d)(2)); *provided, however*, that if the adjusted basis for federal income tax purposes of an asset at the beginning of such Fiscal Period is zero, Depreciation shall be determined with reference to such beginning Gross Asset Value using any reasonable method selected by the Manager.

“Drag Notice” shall have the meaning set forth in Section 9.9(b).

“**Drag Right**” shall have the meaning set forth in Section 9.9(a).

“**Drag-Along Purchaser**” shall have the meaning set forth in Section 9.9(a).

“**Drag-Along Transfer**” shall have the meaning set forth in Section 9.9(a).

“**Dragged Member**” shall have the meaning set forth in Section 9.9(a).

“**Effective Date**” shall have the meaning set forth in the preamble hereof.

“**Encumbrance**” means any security interest, pledge, mortgage, lien (including environmental and tax liens), charge, encumbrance, adverse claim, any defect or imperfection in title, preferential arrangement or restriction, right to purchase, right of first refusal or other burden or encumbrance of any kind, other than those imposed by this Agreement.

“**Facility**” shall have the meaning set forth in the definition of “Business” in this Article 1.

“**Fair Market Value**” shall have the meaning set forth in Section 3.7.

“**Fair Value of the Company**” means, as of a particular date, the value (including for the avoidance of doubt the control premium associated with a sale of all of the equity of a company), expressed in US dollars, that would be obtained at such time in a sale to an unaffiliated buyer on arm’s-length terms of all of the equity of the Company on a stand-alone basis, taking into account, among other matters, lack of marketability and lack of control discounts.

“**First Put Option Period**” shall have the meaning set forth in Section 9.10(a).

“**First Year Contribution Amount**” means the amount equal to: (a) \$10,000,000, *minus* (b) the aggregate amount of cash generated by the Company and used to fund capital expenditures and operating expenses of the Company paid to Third Parties during the period between the Effective Date and the first anniversary of the Effective Date.

“**Fiscal Period**” shall mean, subject to the provisions of Section 706 of the Code, (a) the period commencing on the date hereof and ending on December 31, 2017, (b) any subsequent 12 month period commencing on January 1 and ending on December 31, (c) the period commencing on the later of the formation of the Company or January 1 and ending on the date, if any, on which all of the assets of the Company are distributed to the Members pursuant to Article 10, and (d) any portion of the period described in clauses (a), (b) or (c) of this definition for which the Company is required to allocate Profits and Losses or other items of Company income, gain, loss, deduction or credit pursuant to Article 5.

“**GAAP**” means United States generally accepted accounting principles in effect from time to time.

“**Gross Asset Value**” means with respect to any asset, the asset’s adjusted basis for federal income tax purposes, except as follows:

(a) The initial Gross Asset Value of any asset contributed by a Member to the Company shall be the gross fair market value of such asset, as reasonably determined by the Manager; *provided, however*, that the initial Gross Asset Values of the assets contributed to the Company pursuant to Section 3.1 hereof shall be as set forth in such section or the schedule referred to therein;

(b) The Gross Asset Values of all Company assets shall be adjusted to equal their respective gross fair market values (taking Code Section 7701(g) into account), as reasonably determined by the Manager as of the following times: (i) the acquisition of an additional interest in the Company by any new or existing Member in exchange for more than a de minimis Capital Contribution; (ii) the distribution by the Company to a Member of more than a de minimis amount of Company property as consideration for an interest in the Company; (iii) the grant of an interest in the Company to any new or existing Member for the provision of services; and (iv) the liquidation of the Company within the meaning of Regulations Section 1.704-1(b)(2)(ii)(g) (other than a liquidation caused by a termination of the Company pursuant to Code Section 708(b)(1)(B)); and (v) at such other times as the Manager shall reasonably determine necessary or advisable in order to comply with Regulations Sections 1.704-1(b) and 1.704-2.

(c) The Gross Asset Value of any Company asset distributed to any Member shall be adjusted to equal the gross fair market value (taking Code Section 7701(g) into account) of such asset on the date of distribution, as reasonably determined by the Manager; and

(d) The Gross Asset Value of Company assets will be increased or decreased to reflect any adjustment to the adjusted basis of such assets under Code Sections 734(b) or 743(b), but only to the extent that the adjustment is taken into account in determining Capital Accounts under Regulations Section 1.704-1(b)(2)(iv)(m) and paragraph (f) of the definition of Profits and Losses or Section 5.3(g); *provided, however*, that Gross Asset values shall not be adjusted pursuant to this paragraph (d) to the extent that an adjustment pursuant to paragraph (b) above is required in connection with a transaction that would otherwise result in an adjustment pursuant to this paragraph (d).

(e) If the Gross Asset Value of an asset has been determined or adjusted pursuant to subparagraph (a), (b) or (d), such Gross Asset Value shall thereafter be adjusted by the Depreciation taken into account with respect to such asset, for purposes of computing Profits and Losses.

“Initial Class B Members” means each of (a) the Plan Sponsor, and (b) Ryckman Creditor Trust, a liquidating trust established for the benefit of certain Persons who were creditors of the Company prior to the date hereof (the **“Liquidating Trust”**); *provided*, that no such substitution shall relieve such Initial Class B Member from its obligations under this Agreement, unless expressly agreed in writing by the other Initial Class B Member.

“IRR” means, with respect to the Class A Membership Interests, the annual internal rate of return on such Class A Membership Interests, which annual rate of return shall be expressed as a percentage rounded to the nearest hundredth, calculated using the **“XIRR”** formula in

Microsoft Excel where (i) the “Values” shall be (x) \$16,250,000 plus the amount of the Expense Reimbursement payable under (and as defined in) the Bid Protections Order (as defined in the Plan Sponsor Agreement) (expressed as a negative value), the “Date” of which shall be the Effective Date, (y) the amount of each principal payment made under the Plan Sponsor Note (expressed as a negative value), the “Dates” of which shall be the date on which each such payment is made, and (z) the amount of any Capital Contributions (expressed as a negative value) made by the Plan Sponsor after the Effective Date, the “Dates” of which shall be the date each such Capital Contribution was made to the Company and (ii) the distributions (expressed as a positive value) made by the Company in respect of the Class A Membership Interests pursuant to Section 4.1(a), the “Dates” of which shall be the date each such distribution was made under this Agreement.

“**Liquidating Trust**” shall have the meaning set forth in the definition of “Initial Class B Members.”

“**Liquidating Trust Beneficiary**” means any Person entitled to receive distributions from the assets of the Liquidating Trust pursuant to the Plan and the agreement governing the terms of the Liquidating Trust, or any successors to such Persons or their interests in the Liquidating Trust.

“**Losses**” shall have the meaning set forth in the definition of “Profits” and “Losses.”

“**Make-Whole Valuation**” has the meaning set forth in Section 9.11(d).

“**Manager**” means the Plan Sponsor, in its capacity as Manager under this Agreement.

“**Manager Indemnified Acts**” shall have the meaning set forth in Section 8.1(b).

“**Manager Indemnified Parties**” shall have the meaning set forth in Section 8.1(b).

“**Member**” or “**Members**” shall have the meaning set forth in the preamble hereof.

“**Member Nonrecourse Debt**” shall have the same meaning as “partner nonrecourse debt” as set forth in Regulations Section 1.704-2(b)(4).

“**Member Nonrecourse Debt Minimum Gain**” means an amount, with respect to each Member Nonrecourse Debt, equal to the Company Minimum Gain that would result if such Member Nonrecourse Debt were treated as a Nonrecourse Liability, determined in accordance with Regulations Section 1.704-2(i).

“**Member Nonrecourse Deductions**” shall have the same meaning as “partner nonrecourse deductions” as set forth in Regulations Section 1.704-2(i).

“**Membership Interest**” means a Member’s limited liability company interest in the Company which refers to all of a Member’s rights and interests in the Company in such Member’s capacity as a Member, all as provided in this Agreement and the Act, including (a) that Member’s status as a Member; (b) that Member’s share of the income, gain, loss, deduction and credits of, and the right to receive distributions from, the Company; (c) all other rights,

benefits and privileges enjoyed by that Member (under the Act, this Agreement, or otherwise) in its capacity as a Member, including that Member's rights to vote, consent and approve and otherwise to participate in the management of the Company, including through the Manager; and (d) all obligations, duties and liabilities imposed on that Member (under the Act, this Agreement or otherwise) in its capacity as a Member, including any obligations to make Capital Contributions.

“Nonrecourse Deductions” shall have the meaning specified in Regulations Section 1.704-2(b).

“Nonrecourse Liability” shall have the meaning set forth in Regulations Section 1.704-2(b)(3).

“Notice” means a writing (including an electronic writing), containing the information required by this Agreement to be communicated to a party, and shall be deemed to have been received (a) when personally delivered or sent by telecopy or electronic mail (except that if such writing is delivered or sent at a time that is not during normal business hours on a Business Day, the notice shall be deemed to have been received the next Business Day), (b) one Business Day following delivery by overnight delivery courier, with all delivery charges pre-paid, or (c) on the third Business Day following the date on which it was sent by United States mail, postage prepaid, to such party, in each case, at the address, email address or fax number, as the case may be, of such party as shown on the records of the Company.

“Officer” shall have the meaning set forth in Section 7.2.

“Partially Adjusted Capital Account” means, with respect to any Member for any Fiscal Period or portion thereof, the Capital Account balance of such Member at the beginning of such Fiscal Period, adjusted as set forth herein for all contributions and distributions during such Fiscal Period and all Regulatory Allocations pursuant to Section 5.3 with respect to such Fiscal Period but prior to any allocations of Profits or Losses for such Fiscal Period pursuant to Section 5.1 or Section 5.2.

“Percentage Interest” of a Member means such Member's Class A Percentage Interest or Class B Percentage Interest, as applicable.

“Person” means any individual, partnership, corporation, limited liability company, trust, incorporated or unincorporated organization or other legal entity of any kind.

“Plan Sponsor” shall have the meaning set forth in the recitals.

“Plan Sponsor Agreement” shall have the meaning set forth in the recitals.

“Plan Sponsor Note” means that certain Secured Promissory Note, in the principal amount of \$10 million, dated as of December 27, 2017, issued by the Plan Sponsor, as maker, in favor of the Liquidating Trust, as payee.

“Plan Sponsor Funded Capital” means the sum of (i) \$16,250,000 plus the amount of the Expense Reimbursement payable under (and as defined in) the Bid Protections Order (as

defined in the Plan Sponsor Agreement), (ii) the aggregate amount of all principal payments made under the Plan Sponsor Note, and (iii) the aggregate amount of all Capital Contributions made by the Plan Sponsor to the Company after the Effective Date.

“Prior Agreement” shall have the meaning set forth in the recitals.

“Profits” and **“Losses”** means, for each Fiscal Period, an amount equal to the Company’s net taxable income or loss, determined in accordance with Section 703(a) of the Code (for this purpose, all items of income, gain, loss or deduction required to be stated separately pursuant to Section 703(a)(1) of the Code shall be included in computing such taxable income or loss), with the following adjustments:

(a) Any income of the Company that is exempt from federal income tax and not otherwise taken into account in computing Profits or Losses shall be added to such taxable income or loss;

(b) Any expenditures of the Company described in Section 705(a)(2)(B) of the Code or treated as Code Section 705(a)(2)(B) expenditures pursuant to Regulations Section 1.704-1(b)(2)(iv)(i), and not otherwise taken into account in computing Profits or Losses, shall be subtracted from such taxable income or loss;

(c) In the event the Gross Asset Value of any Company asset is adjusted pursuant to subparagraphs (b), (c) or (d) of the definition of Gross Asset Value, the amount of such adjustment shall be treated as an item of gain (if the adjustment increases the Gross Asset Value of the asset) or an item of loss (if the adjustment decreases the Gross Asset Value of the asset) from the disposition of such asset and shall be taken into account for purposes of computing Profits or Losses;

(d) Gain or loss resulting from any disposition of Property with respect to which gain or loss is recognized for federal income tax purposes shall be computed by reference to the Gross Asset Value of the Property disposed of, notwithstanding that the adjusted tax basis of such Property differs from its Gross Asset Value;

(e) In lieu of the depreciation, amortization, and other cost recovery deductions taken into account in computing such taxable income or loss, there shall be taken into account Depreciation for such Fiscal Period, computed in accordance with the definition of Depreciation; and

(f) To the extent an adjustment to the adjusted tax basis of any Company asset pursuant to Code Section 734(b) or Code Section 743(b) is required, pursuant to Regulations Section 1.704-1(b)(2)(iv)(m)(4) to be taken into account in determining Capital Accounts as a result of a distribution other than in liquidation of a Member’s interest in the Company, the amount of such adjustment shall be treated as an item of gain (if the adjustment increases the basis of the asset) or loss (if the adjustment decreases such basis) from the disposition of such asset and shall be taken into account for purposes of computing Profits or Losses.

Notwithstanding any other provision of this definition, any items specially allocated pursuant to Section 5.3 shall not be considered in computing Profits and Losses.

“Property” means all assets, real or intangible, that the Company may own or otherwise have an interest in from time to time.

“Proposed 100% Transfer” shall have the meaning set forth in Section 9.8(a).

“Proposed 100% Transferee” shall have the meaning set forth in Section 9.8(a).

“Proposed Qualifying Partial Transfer” shall have the meaning set forth in Section 9.8(b).

“Proposed Qualifying Partial Transferee” shall have the meaning set forth in Section 9.8(b).

“Proposed Transfer” means a Proposed 100% Transfer or a Proposed Qualifying Partial Transfer.

“Proposed Transferee” means a Proposed 100% Transferee or a Proposed Qualifying Partial Transferee.

“Proposed Value” shall have the meaning set forth in Section 3.7(b).

“Put Option” shall have the meaning set forth in Section 9.10(a).

“Put Option Notice” shall have the meaning set forth in Section 9.10(b).

“Put Price” shall have the meaning set forth in Section 9.10(c).

“Qualifying Partial Tag Request” shall have the meaning set forth in Section 9.8(b).

“Qualifying Partial Transfer Notice” shall have the meaning set forth in Section 9.8(b).

“Qualifying Transfer Percentage” means the percentage obtained by dividing (a) the aggregate percentage of Class B Membership Interests that are proposed to be Transferred by the Plan Sponsor in a Proposed Qualifying Partial Transfer, by (b) the aggregate percentage of Class B Membership Interests owned by the Plan Sponsor at the time of delivery of the Qualifying Partial Transfer Notice for such Proposed Qualifying Partial Transfer.

“Regulations” means the regulations, including temporary regulations, promulgated by the United States Department of Treasury with respect to the Code, as such regulations are amended from time to time, or corresponding provisions of future regulations.

“Regulatory Allocations” shall have the meaning set forth in Section 5.3(h).

“Representatives” shall have the meaning set forth in Section 12.6.

“Required Contributions” means the required Capital Contributions of the Class A Members pursuant to Section 3.2(a) and Section 3.2(b).

“ROFR Notice” shall have the meaning set forth in Section 9.7.

“Second Put Option Period” shall have the meaning set forth in Section 9.10(a).

“Second Year Contribution Amount” means an amount equal to: (a) \$5,000,000, *minus* (b) any amounts contributed by the Class A Member, after the date hereof but prior to the first anniversary of the date hereof, in excess of the First Year Contribution Amount, *minus* (c) all cash generated by the Company and used to fund capital expenditures and operating expenses of the Company paid to Third Parties during the period between the first anniversary of the date hereof and the second anniversary of the date hereof.

“Subsidiary” means, with respect to a Person, any corporation, partnership, association or other business entity of which (i) if a corporation, a majority of the total voting power of shares of stock entitled (irrespective of whether, at the time, stock of any other class or classes of such corporation shall have or might have voting power by reason of the happening of any contingency) to vote in the election of directors, managers or trustees thereof is at the time owned or controlled, directly or indirectly, by that Person or one or more of the other Subsidiaries of that Person or a combination thereof, or (ii) if a partnership, association or other business entity, a majority of either (x) the partnership or other similar ownership interest thereof or (y) the stock or equity interest of such partnership, association or other business entity’s general partner, managing member or other similar controlling Person, is at the time owned or controlled, directly or indirectly, by such Person or one or more Subsidiaries of that Person or a combination thereof.

“Tag Request” means a request for a Proposed 100% Transfer or a Qualifying Partial Tag Request.

“Target Capital Account” means, with respect to any Member for any Fiscal Period of the Company or portion thereof, an amount (which may be either a positive or a deficit balance) equal to (i) the hypothetical distribution (or contribution) such Member would receive (or contribute) if the Company were to dissolve, all of the Company assets were sold for cash equal to their Gross Asset Value (taking into account any adjustments to Gross Asset Value for such Fiscal Period), all Company liabilities were satisfied by the respective terms thereof (limited with respect to each Nonrecourse Liability or Member Nonrecourse Debt to the Gross Asset Value of assets securing such liability) and the net assets of the Company were distributed in full to the Members pursuant to the terms of Section 10.3(c), all as of the last day of such Fiscal Period or portion thereof, minus (ii) such Member’s share of Company Minimum Gain (including minimum gain with respect to any Member Nonrecourse Debt) computed immediately prior to such hypothetical sale.

“Tax Matters Member” shall have the meaning set forth in Article 11.

“Taxable Year” means the calendar year.

“**TEFRA Rules**” means Subchapter C of Chapter 63 of the Code (Section 6221 et seq.) as in effect for any period to which the BBA Rules do not apply, and any Regulations or guidance issued thereunder, and any similar state or local legislation, regulations or guidance.

“**Third Party**” means any Person other than a Member or any Affiliate of a Member or, with respect to the Liquidating Trust, any Liquidating Trust Beneficiary.

“**Transfer**” or “**Transferred**” means to give, sell, exchange, assign, transfer, bequeath, devise or otherwise dispose of, voluntarily or involuntarily, by operation of law or otherwise. For the avoidance of doubt, the creation of a lien, security interest, pledge, encumbrance, hypothecation or mortgage shall not be a Transfer, but a transfer upon (or in lieu of) foreclosure of any lien, security interest, pledge, encumbrance, hypothecation or mortgage shall constitute a “Transfer”. When referring to a Membership Interest, “Transfer” shall mean the Transfer of such Membership Interest whether of record, beneficially, by participation or otherwise.

“**Transfer Notice**” means a 100% Transfer Notice or a Qualifying Partial Transfer Notice.

“**Transferee**” shall have the meaning set forth in Section 9.1(b).

“**Transferring Member**” shall have the meaning set forth in Section 9.1(a).

“**Trigger Event**” means the earlier to occur of (a) the payment of aggregate distributions in respect of the Class A Membership Interests pursuant to Section 4.1(a) equal to Trigger Threshold or (b) the consummation of (x) a Proposed 100% Transfer, (y) a Proposed Qualifying Partial Transfer or (z) a Drag-Along Transfer.

“**Trigger Threshold**” means the payment by the Company of aggregate distributions in respect of the Class A Membership Interests pursuant to Section 4.1(a) equal to the higher of (i) 200% of the aggregate amount of all Plan Sponsor Funded Capital, or (ii) the amount that results in the achievement of an IRR with respect to the Class A Membership Interests equal to 15%.

ARTICLE 2 GENERAL

2.1 Formation. The Company has been organized as a Delaware limited liability company by the filing of the Certificate of Formation with the Secretary of State of Delaware pursuant to the Act. The name of the Company is “Ryckman Creek Resources, LLC.” The rights and liabilities of the Members shall be as provided in the Act for Members except as provided herein. To the extent that the rights or obligations of any Member are different by reason of any provision of this Agreement than they would be in the absence of such provision, to the extent permitted by the Act, this Agreement shall control.

2.2 Principal Office. The principal office of the Company shall be located at 700 Market Street, St. Louis, MO 63101 c/o Belle Butte, LLC, or at such other place(s) as the Manager may determine from time to time.

2.3 Registered Office and Registered Agent. The location of the registered office and the name of the registered agent of the Company in the State of Delaware shall be as stated in the Certificate of Formation or as determined from time to time by the Manager.

2.4 Purpose of the Company. The Company's purposes, and the nature of the business to be conducted and promoted by the Company, are (a) to engage in the Business and (b) to engage in any and all activities necessary, advisable, convenient, or incidental to the foregoing.

2.5 Date of Dissolution. The Company shall have perpetual existence unless the Company is dissolved pursuant to Article 10 hereof. The existence of the Company as a separate legal entity shall continue until cancellation of the Certificate of Formation in the manner required by the Act.

2.6 Qualification. Each of the Officers of the Company is hereby authorized to qualify the Company to do business as a foreign limited liability company in any jurisdiction in which the Company may wish to conduct business and each is hereby designated as an authorized person, within the meaning of the Act, to execute, deliver and file any amendments or restatements of the Certificate of Formation and any other certificates and any amendments or restatements thereof necessary for the Company to so qualify to do business in any such state or territory.

2.7 Members.

(a) Powers of Members. The Members shall have the power to exercise any and all rights or powers granted to the Members pursuant to the express terms of this Agreement. Except as expressly provided herein, the Members shall have no power to bind the Company and no authority to act on behalf of the Company.

(b) Partition. Each Member waives any and all rights that it may have to maintain an action for partition of the Company's Property.

(c) Resignation. Except upon a Transfer of all of its Membership Interests in accordance with this Agreement, a Member may not resign from the Company prior to the dissolution and winding up of the Company. A Member ceases to be a Member only upon: (i) a Transfer of all of such Member's Membership Interest and the Transferee's admission as a substitute Member pursuant to Article 9, or (ii) completion of dissolution and winding up of the Company pursuant to Article 10.

(d) Ownership. Each Membership Interest shall correspond to a "limited liability company interest" as is provided in the Act. The Company shall be the owner of the Property. No Member shall have any ownership interest or right in the Property, including Property conveyed by a Member to the Company, except indirectly by virtue of a Member's ownership of a Membership Interest.

2.8 Reliance by Third Parties. Except with respect to certain tax matters, Persons dealing with the Company shall be entitled to rely conclusively upon the power and authority of an Officer.

ARTICLE 3
CAPITALIZATION OF THE COMPANY

3.1 Membership Interests.

(a) The Company hereby issues to each Person described on Schedule 3.1 as a Class A Member, the Class A Membership Interests set forth next to such Person's name, and each such Person is hereby be admitted to the Company as a Class A Member. The Class A Members shall be required to make the Required Contributions provided for in Section 3.2 and shall be entitled to the allocations, distributions, and other rights as are prescribed for the Class A Members in this Agreement. The Company shall not issue any additional Class A Membership Interests after the date hereof.

(b) The Company hereby issues to each Person described on Schedule 3.1 as a Class B Member, the Class B Membership Interests set forth next to such Person, and each such Person is hereby be admitted to the Company as a Class B Member. The Class B Members shall be entitled to the allocations, distributions and other rights as are prescribed for the Class B Members in this Agreement.

3.2 Required Contributions.

(a) During the period from the Effective Date until the first anniversary of the Effective Date, each Class A Member shall make cash Capital Contributions to the Company in accordance with the Business Plan, which Capital Contributions, if there are more than one Class A Members at the time of such Capital Contribution shall be made in proportion to the Class A Members' Class A Percentage Interests; *provided*, that if, as of the first anniversary of the date hereof, the aggregate amount of Capital Contributions made by the Class A Members pursuant to this Section 3.2(a) is less than the First Year Contribution Amount, then on such first anniversary date the Class A Members shall make an aggregate cash Capital Contribution (with each Class A Member contributing in proportion to its Class A Percentage Interest) to the Company in an aggregate amount equal to: (i) the First Year Contribution Amount, *minus* (ii) the aggregate amount of Capital Contributions made by the Class A Members pursuant to this Section 3.2(a).

(b) During the period from the first anniversary of the Effective Date until the second anniversary of the Effective Date, the Class A Members shall make cash Capital Contributions to the Company in accordance with the Business Plan; *provided*, that if, as of the second anniversary of the Effective Date, the aggregate amount of Capital Contributions made by the Class A Members pursuant to this Section 3.2(b) is less than the Second Year Contribution Amount, the Class A Members shall make an aggregate cash Capital Contribution (with each Class A Member contributing in proportion to its Class A Percentage Interest) to the Company in an amount equal to the lesser of (i) an amount equal to (x) the Second Year Contribution Amount, *minus* (y) the aggregate amount of Capital Contributions made by the Class A Members pursuant to this Section 3.2(b) during such period, and (ii) the amount necessary for the Facility to achieve 16 billion cubic feet of capacity. Nothing contained herein shall prevent the Class A Member from contributing an amount equal to the sum of the First Year Contribution Amount and the Second Year Contribution Amount prior to the first

anniversary of the date hereof, and if the Class A Member contributes such amount the obligations of the Class A Member under this Section 3.2 shall be satisfied.

(c) Schedule 3.1 reflects the amount of the Capital Contribution made by the Class A Members on the date hereof and shall be updated periodically by the Manager to reflect Capital Contributions made by the Class A Members pursuant to this Section 3.2.

3.3 Additional Capital Contributions; Adjustments to Class B Percentage Interests.

(a) Each Initial Class B Member shall have the right, but not the obligation, to participate in any Additional Capital Contribution up to an amount equal to the aggregate amount of such Additional Capital Contribution multiplied by its Class B Percentage Interest, *provided*, that no Member shall be required to make any Additional Capital Contribution.

(b) If at any time after all Required Contributions have been made by the Class A Members, the Manager reasonably determines that the Company requires an Additional Capital Contribution in order to fund the capital expenditures, operating expenses, or any other purpose of the Company as the Manager may determine, the Manager may request such an Additional Capital Contribution by delivering to each Initial Class B Member at least ten (10) Business Days prior to the date on which such Additional Capital Contribution is to be made a notice setting forth the amount of the Additional Capital Contribution, the maximum portion of such Additional Capital Contribution that each Initial Class B Member may make and the date on which such Additional Capital Contributions is required to be made, and upon receipt of such notice each Initial Class B Member may fund all or a portion of the amount set forth in such notice by paying such amount to the Company on or before the date set forth in such notice.

(c) All Additional Capital Contributions shall be made in cash and, upon funding of any Additional Capital Contributions by one or more of the Initial Class B Members, Schedule 3.1 will be amended to reflect the amounts of such Additional Capital Contribution. If any Additional Capital Contributions are made by Class B Members but not in proportion to their respective Class B Percentage Interests, or if a new Class B Member is admitted to the Company in exchange for a Capital Contribution, or if a Class B Member elects not to make an Additional Capital Contribution when requested in accordance with this Agreement, then the Class B Percentage Interest of each Member shall be adjusted based upon the Fair Value of the Company at the time of such issuance or contribution, determined in accordance with Section 3.7. The names, addresses, Capital Contributions and Percentage Interests of the Members shall be reflected in the books and records of the Company.

(d) Until all Required Contributions have been made by the Class A Member(s) pursuant to Section 3.2, the Company shall not issue, nor may any Member or Manager request the issuance of, any Additional Issued Interest. Subject to Section 7.4(a), prior to issuing or selling (or permitting or causing any Subsidiary to issue or sell) any Additional Issued Interests, the Manager (acting on behalf of the Company) shall request that each Class B Member acquire such Additional Issued Interest, in proportion to its respective Class B Percentage Interest at such time. The request shall specify the amount(s) and date(s) on which such Additional Issued Interest purchase(s) are required. Each Class B Member shall have the right, but not the obligation, to fund its share of such Additional Issued Interest in accordance with such request by

notifying the Manager on or before the 10th Business Day following the request. If a Class B Member elects not to fund its share of such Additional Issued Interest, then the other Class B Members shall have the right, but not the obligation, to (A) fund the entire amount of such Additional Issued Interest as provided in the request (and its interest in the Company or Subsidiary shall be adjusted as provided in Section 3.2(c)) or (B) cause the Company to issue such Additional Issued Interests in the Company or such Subsidiary, whether in a private or public offering, including an initial public offering, to a one or more Third Parties; *provided, however,* that (i) the Company may only cause a Subsidiary to issue, grant or sell any such Additional Issued Interest if the request to the Initial Class B Members specified that the requested contribution would be made to such Subsidiary and (ii) the terms of such Additional Issued Interests and the terms on which such Additional Issued Interests are issued shall be no less favorable in any material respect to the Company (or such Subsidiary) than those set forth in the request to the Initial Class B Members (allowing for customary underwriting commissions and discounts, dealer concession and reallowances, offering expenses and other transaction fees and costs). If a Third Party purchases Additional Issued Interests hereunder, each Member shall approve such Third Party as a Member.

3.4 Loans.

(a) No Member shall be obligated to loan funds to the Company. Loans by a Member to the Company shall not be considered Capital Contributions. The amount of any such loan shall be a debt of the Company owed to such Member in accordance with the terms and conditions upon which such loan is made.

(b) A Member may (but shall not be obligated to) guarantee a loan made to the Company. If a Member guarantees a loan made to the Company and is required to make payment pursuant to such guarantee to the maker of the loan, then the amounts so paid to the maker of the loan shall be treated as a loan by such Member to the Company and not as an Additional Capital Contribution.

3.5 Maintenance of Capital Accounts.

(a) The Manager, acting on behalf of the Company, shall maintain for each Member a separate Capital Account with respect to the Membership Interest owned by such Member in accordance with the following provisions:

(i) To each Member's Capital Account there shall be credited (A) such Member's Capital Contributions, (B) such Member's share of Profits (and items of income and gain that are specially allocated pursuant to Section 5.3) and (C) the amount of any Company liabilities assumed by such Member or which are secured by any Property distributed to such Member;

(ii) To each Member's Capital Account there shall be debited (A) the amount of money and the Gross Asset Value of any Property distributed to such Member, (B) such Member's share of Losses (and items of loss and deduction that are specially allocated pursuant to Section 5.3) and (C) the amount of any liabilities of such Member assumed by the

Company or which are secured by any Property contributed by such Member to the Company (except to the extent already reflected in the amount of such Member's Capital Contribution);

(iii) In the event Membership Interests are Transferred in accordance with the terms of this Agreement, the Transferee shall succeed to the Capital Account of the transferor to the extent such Capital Account relates to the Transferred Membership Interests;

(iv) In determining the amount of any liability for purposes of Sections 3.5(a)(i) and (ii) there shall be taken into account Code Section 752(c) and any other applicable provisions of the Code and Regulations;

(v) In addition to the adjustments specified by this Section 3.5, each Member's Capital Account shall also be adjusted for any other increases or decreases required to be made to Capital Accounts pursuant to Code Section 704(b) and Regulations Section 1.704-1(b)(2)(iv).

(b) The foregoing Section 3.5(a) and the other provisions of this Agreement relating to the maintenance of Capital Accounts are intended to comply with Section 704(b) of the Code and Regulations Section 1.704-1(b) and shall be interpreted and applied in a manner consistent with such Regulation. The Manager in its discretion and to the extent otherwise consistent with the terms of this Agreement shall (i) make any adjustments that are necessary or appropriate to maintain equality between the Capital Accounts of the Members and the amount of capital reflected on the Company's balance sheet, as computed for book purposes, in accordance with Regulations Section 1.704-1(b)(2)(iv)(q), and (ii) make any appropriate modifications in the event unanticipated events might otherwise cause this Agreement not to comply with Section 704(b) of the Code and Regulations Sections 1.704-1(b) or 1.704-2.

3.6 Capital Withdrawal Rights, Interest and Priority. Except as expressly provided in this Agreement, no Member shall be entitled to (a) withdraw or reduce such Member's Capital Contribution or to receive any distributions from the Company, or (b) receive or be credited with any interest on the balance of such Member's Capital Contribution at any time.

3.7 Determination of Fair Market Value. Any determination of the Fair Value of the Company or a Subsidiary (for purposes of this Section 3.7, the "**Fair Market Value**") shall take into account, among other matters, lack of marketability and lack of control discounts, according to the following procedures:

(a) The Fair Market Value shall be an amount agreed upon by the Initial Class B Members within five (5) Business Days after delivery of the notice required by such section.

(b) If the Initial Class B Members cannot agree on the Fair Market Value within such five (5) Business Day period, each of the Initial Class B Members will submit its respective proposal as to the Fair Market Value (its "**Proposed Value**") to the other Initial Class B Member within ten (10) Business Days after the expiration of such five (5) Business Day period. If the higher Proposed Value is not more than 10% higher than the lower Proposed Value, then the Fair Market Value shall be equal to the average of such Proposed Values.

(c) In the event that one of the Proposed Values submitted under subparagraph (b) is more than 10% higher than the other Proposed Value, then within ten Business Days after the submission of such proposals, the Initial Class B Members shall jointly select and retain an independent regionally recognized valuation firm (the “*Appraiser*”). In the event that such parties fail to jointly select the Appraiser within such time period, then at the request of either Initial Class B Member, the American Arbitration Association shall provide the Initial Class B Members with a list of five Appraiser candidates and each of the Initial Class B Members, within two (2) Business Days of receipt of such list, shall be allowed to strike two names from the list and rank the remaining Appraiser candidates in order of acceptance. The American Arbitration Association shall, within two (2) Business Days thereafter, select one of the Appraiser candidates remaining on both lists, taking into account the rankings of such candidates by the Initial Class B Members. The Appraiser shall be requested to make its determination within a period of 30 days after the deadline for submissions to be made by the Initial Class B Members pursuant to subparagraph (d), or as soon as practicable thereafter.

(d) Within five Business Days of the appointment of the Appraiser, each of the Initial Class B Members shall submit to the Appraiser (i) such Initial Class B Member’s Proposed Value previously submitted to the other party pursuant to subparagraph (b), (ii) a list of factors that it believes to be relevant in the determination of the Fair Market Value, and (iii) the reasons for that Proposed Value. In addition, each Initial Class B Member shall at the same time deliver to the other Initial Class B Member a copy of any submission or information it has supplied to the Appraiser.

(e) The Appraiser shall then make its own determination of the Fair Market Value, having requested such further information from the Initial Class B Members and/or the Company as it shall require.

(f) The Appraiser shall certify to each of the Initial Class B Members and the Company (i) that, having considered the respective submissions of each of the Initial Class B Members, the Appraiser has made its own determination of the Fair Market Value according to the principles of this Agreement and (ii) which of the Proposed Values submitted by the Initial Class B Members it determines to be closer to the Fair Market Value. The Proposed Value submitted by either of the Initial Class B Members so certified by the Appraiser pursuant to clause (ii) of the immediately preceding sentence shall thereupon be deemed to be the Fair Market Value.

(g) The fees and expenses of the Appraiser shall be paid by the Company. The Appraiser shall act as an expert and not as an arbitrator and its determination shall be final and binding upon the Initial Class B Members. The Appraiser shall have no liability to any of the Initial Class B Members or the Company in respect of its determination.

(h) Notwithstanding anything in this Agreement to the contrary, any determination of Fair Market Value pursuant to this Section 3.7 shall be applicable only for purposes of the specific instance for which such Fair Market Value is determined, and shall not apply to any other instance requiring a determination of Fair Market Value.

ARTICLE 4 DISTRIBUTIONS

4.1 Distributions of Available Cash.

(a) Until a Trigger Event has occurred, an amount equal to 100% of Available Cash with respect to each fiscal quarter of the Company shall be distributed to the Class A Members in proportion to their Class A Percentage Interest until the aggregate amount of such distributions equals the Trigger Threshold. For the avoidance of doubt, prior to the occurrence of a Trigger Event, the Class B Members shall not be entitled to any distributions hereunder in respect of the Class B Membership Interests.

(b) Following the occurrence of a Trigger Event, an amount equal to 100% of Available Cash with respect to each fiscal quarter of the Company shall be distributed to the Class B Members in proportion to their Class B Percentage Interest. For the avoidance of doubt, from and after the occurrence of a Trigger Event, the Class A Members shall not be entitled to any distributions hereunder in respect of the Class A Membership Interests.

(c) Any payment required pursuant to this Section 4.1 shall be made to the applicable Members within 45 days after the end of the referenced quarter to an account specified by each such Member in written notice to the Company (which notice must be received by the Company at least 5 days prior to the date such payment is scheduled to be made).

4.2 Persons Entitled to Distributions. All distributions of Available Cash to Members for a fiscal quarter pursuant to Section 4.1 shall be made to the Members shown on the records of the Company to be entitled thereto as of the last day of such quarter, unless the Transferring Member and Transferee of any Membership Interest otherwise agree in writing to a different distribution.

4.3 Limitations on Distributions

(a) Notwithstanding any provision of this Agreement to the contrary, no distributions shall be made except pursuant to this Article 4 or Article 10.

(b) Notwithstanding any provision of this Agreement to the contrary, no distribution hereunder shall be permitted if such distribution would violate Section 18-607 of the Act or other applicable law.

ARTICLE 5 ALLOCATIONS

5.1 Profits. Profits for each Fiscal Period shall be allocated to the Members, on a *pari passu* basis, so as to reduce the differences between such Members' Target Capital Accounts and their Partially Adjusted Capital Accounts for such Fiscal Period. No portion of Profits for any Fiscal Period shall be allocated to any Member under this Section 5.1 if such Member's Partially Adjusted Capital Account is greater than or equal to its Target Capital Account for the taxable year.

5.2 Losses. Losses for each Fiscal Period shall be allocated to the Members, on a *pari passu* basis, so as to reduce the differences between such Members' Partially Adjusted Capital Accounts and their Target Capital Accounts for such Fiscal Period. No portion of Loss for any Fiscal Period shall be allocated to any Member under this Section 5.2 if the Member's Partially Adjusted Capital Account is less than or equal to its Target Capital Account for the taxable year.

5.3 Regulatory Allocations. The following special allocations shall be made in the following order and prior to any other allocations under this Agreement:

(a) Minimum Gain Chargeback. Notwithstanding any other provision of this Article 5 and except as otherwise provided in Regulations Section 1.704-2(f), if there is a net decrease in Company Minimum Gain during any Fiscal Period of the Company, each Member shall be specially allocated items of Company income and gain for such Fiscal Period (and, if necessary, subsequent Fiscal Periods) in an amount equal to such Member's share of the net decrease in Company Minimum Gain, as determined under Regulations Section 1.704-2(g). Allocations pursuant to the previous sentence shall be made in proportion to the respective amounts required to be allocated to each Member pursuant thereto. The items to be so allocated shall be determined in accordance with Regulations Sections 1.704-2(f) and (j). This Section 5.3(a) is intended to comply with the minimum gain chargeback requirement in such Regulations Section 1.704-2(f) and shall be interpreted consistently therewith.

(b) Member Minimum Gain Chargeback. Notwithstanding any other provision of this Article 5, if there is a net decrease in Member Nonrecourse Debt Minimum Gain attributable to a Member Nonrecourse Debt, then, each Member who has a share of the Member Nonrecourse Debt Minimum Gain attributable to such Member Nonrecourse Debt, determined in accordance with Regulations Section 1.704-2(i), shall be specially allocated items of Company income and gain for such Fiscal Period (and, if necessary, subsequent Fiscal Periods) in an amount equal to such Member's share of the net decrease in Member Nonrecourse Debt Minimum Gain attributable to such Member Nonrecourse Debt, determined in accordance with Regulations Section 1.704-2(i)(4). Allocations pursuant to the previous sentence shall be made in proportion to the respective amounts required to be allocated to each Member pursuant thereto. The items to be allocated shall be determined in accordance with Regulations Sections 1.704-2(i)(4) and (j)(2). This Section 5.3(b) is intended to comply with the minimum gain chargeback requirement in Regulations Sections 1.704-2(i)(4) and shall be interpreted consistently therewith.

(c) Qualified Income Offset. In the event any Member unexpectedly receives any adjustments, allocations, or distributions described in Regulations Sections 1.704-1(b)(2)(ii)(d)(4), (5) or (6), items of Company income and gain shall be specially allocated to such Member in an amount and manner sufficient to eliminate, to the extent required by the Regulations, the Adjusted Capital Account Deficit of such Member as quickly as possible, *provided* that an allocation pursuant to this Section 5.3(c) shall be made only if and to the extent that such Member would have an Adjusted Capital Account Deficit after all other allocations provided for in this Article 5 have been tentatively made as if this Section 5.3(c) were not in the Agreement. It is intended that this Section 5.3(c) comply with the qualified income offset requirement in Regulations Section 1.704-1(b)(2)(ii)(d) and shall be interpreted consistently therewith.

(d) Gross Income Allocation. In the event any Member has an Adjusted Capital Account Deficit at the end of any taxable year of the Company, each such Member shall be specially allocated items of Company income and gain in the amount of such excess as quickly as possible, provided that an allocation pursuant to this Section 1(e) shall be made only if and to the extent that such Member would have a deficit Capital Account in excess of such sum after all other allocations provided for in this Section 5.3 have been made as if 5.3(c) and this Section 5.3(d) were not in the Agreement.

(e) Nonrecourse Deductions. Nonrecourse Deductions for any Fiscal Period shall be allocated among the Members in accordance with their respective Class B Percentage Interests.

(f) Member Nonrecourse Deductions. Any Member Nonrecourse Deductions for any Fiscal Period of the Company or portion thereof shall be allocated to the Member who bears the economic risk of loss with respect to the Member Nonrecourse Debt to which such Member Nonrecourse Deductions are attributable, in accordance with Regulations Section 1.704-2(i)(1).

(g) Section 754 Adjustments. To the extent an adjustment to the adjusted tax basis of any Company asset is required pursuant to Regulations Sections 1.704-1(b)(2)(iv)(m) (2) or (4) to be taken into account in determining Capital Accounts, the amount of such adjustment to the Capital Accounts shall be treated as an item of gain (if the adjustment increases the basis of the asset) or loss (if the adjustment decreases such basis), and such gain or loss shall be allocated to the Members in a manner consistent with the manner in which their Capital Accounts are required to be adjusted pursuant to such Sections of the Regulations, as applicable.

(h) Curative Allocations. The allocations set forth in Sections 5.3(a), (b), (c), (e), (f) and (g) hereof (the “**Regulatory Allocations**”) are intended to comply with certain requirements of the Regulations. It is the intent of the Members that, to the extent possible, all Regulatory Allocations shall be offset either with other Regulatory Allocations or with special allocations of other items of Company income, gain, loss, or deduction pursuant to this Section 5.3(h). Therefore, notwithstanding any other provision of this Article 5 (other than the Regulatory Allocations), the Manager shall make such offsetting special allocations of income, gain, loss or deduction in whatever manner it determines appropriate so that, after such offsetting allocations are made, each Member’s Capital Account balance is, to the extent possible, equal to the Capital Account balance such Member would have had if the Regulatory Allocations were

not part of this Agreement and all such items were allocated pursuant to Section 5.1 and Section 5.2 without regard to the Regulatory Allocations.

5.4 Tax Allocations: Code Section 704(c).

(a) Except as otherwise provided herein, for federal income tax purposes, (i) each item of income, gain, loss and deduction shall be allocated among the Members in the same manner as its correlative item of “book” income, gain, loss or deduction is allocated pursuant to this Article 5, and (ii) each tax credit shall be allocated to the Members in the same manner as the receipt or expenditure giving rise to such credit is allocated pursuant to this Article 5.

(b) In accordance with Code Section 704(c) and the Regulations thereunder, income, gain, loss and deduction with respect to any Property contributed to the capital of the Company shall, solely for tax purposes, be allocated among the Members so as to take account of any variation between the adjusted basis of such Property to the Company for federal income tax purposes and its initial Gross Asset Value (computed in accordance with the definition herein of “Gross Asset Value”). Any elections under Section 704(c) shall be made in accordance with Section 11.8.

(c) In the event the Gross Asset Value of any Company asset is adjusted pursuant to the definition herein of “Gross Asset Value”, subsequent allocations of income, gain, loss and deduction with respect to such asset shall take account of any variation between the adjusted basis of such asset for federal income tax purposes and its Gross Asset Value in the same manner as under Code Section 704(c) and the Regulations thereunder.

(d) Allocations pursuant to this Section 5.4 are solely for purposes of federal, state, and local taxes and shall not affect, or in any way be taken into account in computing, any Member’s Capital Account or share of Profits, Losses, other items, or distributions pursuant to any provision of this Agreement.

5.5 Change in Percentage Interests. In the event that the Members’ Percentage Interests change during a Taxable Year, Profits and Losses shall be allocated taking into account the Members’ varying Percentage Interests for such Taxable Year, determined on a daily, monthly or other basis as determined by the Manager, using any permissible method under Code Section 706 and the Regulations thereunder.

5.6 Withholding. Each Member hereby authorizes the Company to withhold from income or distributions allocable to such Member and to pay over any taxes payable by the Company or any of its Affiliates as a result of such Member’s participation in the Company (including as a result of a distribution in kind); if and to the extent that the Company shall be required to withhold any such taxes, such Member shall be deemed for all purposes of this Agreement to have received a distribution from the Company as of the time such withholding is required to be paid, which distribution shall be deemed to be a distribution to such Member to the extent that the Member is then entitled to receive a distribution. To the extent that the aggregate of such withholdings in respect of a Member for any period exceeds the distributions to which such Member is entitled for such period, the amount of such excess shall be considered a demand loan from the Company to such Member, with interest at the rate of interest per annum

that Citibank, N.A., or any successor entity thereto, announces from time to time as its prime lending rate, which interest shall be treated as an item of Company income, until discharged by such Member by repayment, which may be made in the sole discretion of the Manager out of distributions to which such Member would otherwise be subsequently entitled. The withholdings referred to in this Section 5.6 shall be made at the maximum applicable statutory rate under applicable tax law unless the Manager shall have received an opinion of counsel or other evidence, satisfactory to the Manager, to the effect that a lower rate is applicable, or that no withholding is applicable. In the event of any claimed over-withholding, a Member shall be limited to an action against the tax authority in the applicable jurisdiction.

ARTICLE 6 MEMBERS' MEETINGS

6.1 Meetings of Members; Place of Meetings. Regular meetings of the Members shall be held as determined by the Initial Class B Members. All meetings of the Members shall be held at a location either within or outside the State of Delaware as designated from time to time by the Manager and stated in the Notice of the meeting or in a duly executed waiver of the Notice thereof. Special meetings of the Members may be held for any purpose or purposes, unless otherwise prohibited by law, and may be called by the Manager or by either Initial Class B Member. A Member expecting to be absent from a meeting shall be entitled to designate in writing (or orally; *provided*, that such oral designation is later confirmed in writing) a proxy (an “**Authorized Representative**”) to act on behalf of such Member with respect to such meeting (to the same extent and with the same force and effect as the Member who has designated such Authorized Representative). Such Authorized Representative shall have full power and authority to act and take actions or refrain from taking actions as the Member by whom such Authorized Representative has been designated. Members and Authorized Representatives may participate in a meeting of the Members by means of conference telephone or other similar communication equipment whereby all Members or Authorized Representatives participating in the meeting can hear each other. Participation in a meeting in this manner shall constitute presence in person at the meeting, except when a Member or Authorized Representative participates for the express purpose of objecting to the transaction of any business on the ground that the meeting was not lawfully called or convened. Notwithstanding anything in this Article 6 to the contrary, Class A Members may be present at any meeting of the Members but shall not have any voting right associated with their Class A Membership Interests.

6.2 Quorum; Voting Requirement. The presence, in person or by proxy, of a Class B Majority in Interests of the Class B Members shall constitute a quorum for the transaction of business by the Class B Members. The Class B Majority in Interests shall constitute a valid decision of the Members, except that where a different vote is required by the Act or contemplated by this Agreement, such vote shall constitute a valid decision of the Class B Members.

6.3 Action Without Meeting. Any action required or permitted to be taken at any meeting of Class B Members of the Company may be taken without a meeting, without prior notice and without a vote if a consent in writing setting forth the action so taken is signed by Class B Members having not less than the minimum Class B Percentage Interest that would be necessary to authorize or take such action at a meeting of the Members. Prompt Notice of the

taking of any action taken pursuant to this Section 6.3 by less than the unanimous written consent of the Class B Members shall be given by the Manager to those Members who have not consented in writing.

6.4 Notice. Notice stating the place, day and hour of the meeting of Members and the purpose for which the meeting is called shall be delivered personally or sent by mail or by electronic mail not less than five (5) Business Days nor more than sixty (60) days before the date of the meeting by or at the direction of the Manager or other Persons calling the meeting, to each Class B Member entitled to vote at such meeting.

6.5 Waiver of Notice. When any Notice is required to be given to any Member hereunder, a waiver thereof in writing signed by the Member, whether before, at or after the time stated therein, shall be equivalent to the giving of such Notice.

ARTICLE 7 MANAGEMENT AND CONTROL

7.1 Management.

(a) Except as provided for in Section 7.4, the Company shall be managed by the Manager, who shall have full authority and discretion and all necessary powers to (i) take any actions it deems necessary or advisable for the administration of the Company's affairs and (ii) manage and carry out the purposes, business, property, and affairs of the Company, including the power to take the following actions on behalf of the Company:

- (i) Subject to the terms of Article 3, request Additional Capital Contributions from the Class B Members;
- (ii) sell assets to Third Parties in the ordinary course of the Company's business; and
- (iii) make distributions in accordance with Article 4.

(b) Except as provided in Section 4.1, the Manager shall not be compensated for its services as Manager or as manager of any of the Subsidiaries of the Company.

7.2 Officers. The Manager shall have the power to appoint any Person or Persons as the Company's officers (the "**Officers**") to act for the Company and to delegate to such Officers such of the powers as are granted to the Manager hereunder. Any decision or act of an Officer within the scope of the Officer's designated or delegated authority shall control and shall bind the Company (and any business entity for which the Company exercises direct or indirect executory authority). The Officers may have such titles as the Manager shall deem appropriate, which may include (but need not be limited to) President, Chief Executive Officer, Executive Vice President, Vice President, Chief Operating Officer, Chief Financial Officer, Treasurer, Controller or Secretary. Unless the authority of an Officer is limited by the Manager, including any limits on spending authority, any Officer so appointed shall have the same authority to act for the Company as a corresponding officer of a Delaware corporation would have to act for a Delaware corporation in the absence of a specific delegation of authority. The Officers shall

hold office until their respective successors are chosen and qualify or until their earlier death, resignation or removal. Any Officer elected or appointed by the Manager may be removed at any time by the Manager.

7.3 No Compensation of Manager. Manager shall not receive any fees for its services in administering the Company.

7.4 Matters Requiring Member Approval. Notwithstanding anything in this Agreement to the contrary except as set forth in Section 9.10, for so long as the Liquidating Trust has a Class B Percentage Interest of least fifteen percent (15%) or the Plan Sponsor Note remains outstanding, without the prior written consent of the Liquidating Trust, the Company shall not take or permit to be taken any of the following actions:

(a) request Additional Capital Contributions from the Class B Members other than in proportion to each Class B Member's Class B Percentage Interest;

(b) authorize, sell and/or issue any Membership Interests, partnership interests, capital stock, or other equity interest in the Company or any Subsidiary of the Company, whether in a private or public offering, including an initial public offering, or grant, sell or issue other securities (including rights, warrants and options) convertible into, exchangeable for or exercisable for any of Membership Interests or partnership interests, capital stock, or other equity interests in the Company or any Subsidiary of the Company, whether or not presently convertible, exchangeable or exercisable; *provided, however*, the Manager may, but is not required to, issue equity incentive compensation to Company employees (provided that such employees may not be affiliated with the Manager), in a manner reasonably determined by the Manager and in conformity with standard practices of similarly situated companies in the Company's industry; *provided further, however*, that any such equity type incentive compensation may be dilutive the Class B Members on a pro-rata basis;

(c) change, modify or amend this Agreement or any organizational document of any Subsidiary of the Company in any manner that is disproportionately adverse to the Liquidating Trust;

(d) transact with any Affiliate of a Member other than on commercially reasonable arm's-length terms; or

(e) cause the Company to borrow money from Third Parties in an amount exceeding \$50,000,000 in the aggregate.

ARTICLE 8

DUTIES; LIABILITY AND INDEMNIFICATION

8.1 Duties of Managers and Members.

(a) *Duty of Loyalty.* The Members agree that nothing in this Agreement (or in the Act as it applies to this Agreement) shall restrict the Members or any of the Members' Affiliates (including, if applicable, the Manager) from engaging or investing in, independently or with others, any business activity of any type or description, including those that might be the same as

or similar to the Company's business and that might be in direct or indirect competition with the Company. Neither the Company nor any other Member shall have any right in or to such other ventures or activities or to the income or proceeds derived therefrom. Neither any Member nor the Manager shall be obligated to present any investment opportunity or prospective economic advantage to the Company, even if the opportunity is of the character that, if presented to the Company, could be taken by the Company. The Members and the Manager shall have the right to hold any investment opportunity or prospective economic advantage for their own account or to recommend such opportunity to Persons other than the Company. Each Member hereby waives any and all rights and claims that it may otherwise have under this Agreement (or the Act as it applies to this Agreement) against the other Members and their Affiliates (including, if applicable, the Manager) as a result of any of such activities.

(b) *Duty of Care.* The purpose of this Section 8.1(b) is to set forth the agreement between the Members with respect to the duty of care that the Manager owes to the Members and to the Company. THE MANAGER SHALL ONLY BE LIABLE TO THE COMPANY AND THE OTHER MEMBERS AND THEIR RESPECTIVE AFFILIATES FOR ITS GROSS NEGLIGENCE, WILLFUL MISCONDUCT OR FRAUD IN THE PERFORMANCE OF THE DUTIES DELEGATED TO IT IN THIS AGREEMENT; BUT THE MANAGER, ITS REPRESENTATIVE, ITS AFFILIATES AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES AND AGENTS (THE "**MANAGER INDEMNIFIED PARTIES**") SHALL NOT BE LIABLE TO THE COMPANY, ANY OTHER MEMBER OR REPRESENTATIVE, OR ANY OFFICER OR EMPLOYEE OF THE COMPANY FOR ANY ACTS OR OMISSIONS THAT DO NOT CONSTITUTE GROSS NEGLIGENCE, WILLFUL MISCONDUCT OR FRAUD, INCLUDING THE STRICT LIABILITY OR OTHER FAULT OR RESPONSIBILITY (SHORT OF GROSS NEGLIGENCE, WILLFUL MISCONDUCT OR FRAUD) OF THE MANAGER OR ANY OF ITS REPRESENTATIVES (THE "**MANAGER INDEMNIFIED ACTS**"); AND THE COMPANY SHALL INDEMNIFY, PROTECT, DEFEND, RELEASE AND HOLD HARMLESS EACH MANAGER INDEMNIFIED PARTY FROM AND AGAINST ANY CLAIMS ASSERTED BY OR ON BEHALF OF ANY PERSON (INCLUDING ANOTHER MEMBER) THAT ARISE OUT OF, RELATE TO OR ARE OTHERWISE ATTRIBUTABLE TO, DIRECTLY OR INDIRECTLY, THE MANAGER INDEMNIFIED ACTS.

(c) *Disclaimer of Duties.* WITH RESPECT TO ANY VOTE, CONSENT OR APPROVAL AT ANY MEETING OF THE MEMBERS OR OTHERWISE UNDER THIS AGREEMENT (OTHER THAN ACTIONS OF THE MANAGER IN ITS CAPACITY AS SUCH), EACH MEMBER (AND ITS AUTHORIZED REPRESENTATIVES ACTING ON ITS BEHALF) MAY GRANT OR WITHHOLD SUCH VOTE, CONSENT OR APPROVAL (A) IN ITS SOLE AND ABSOLUTE DISCRETION, (B) WITH OR WITHOUT CAUSE, (C) SUBJECT TO SUCH CONDITIONS AS IT SHALL DEEM APPROPRIATE, AND (D) WITHOUT TAKING INTO ACCOUNT THE INTERESTS OF, AND WITHOUT INCURRING LIABILITY TO, THE COMPANY, ANY OTHER MEMBER OR AUTHORIZED REPRESENTATIVE, OR ANY OFFICER OR EMPLOYEE OF THE COMPANY. THE PROVISIONS OF THIS SECTION 8.1(c) SHALL APPLY NOTWITHSTANDING THE NEGLIGENCE, GROSS NEGLIGENCE, WILLFUL MISCONDUCT, STRICT LIABILITY OR OTHER FAULT OR RESPONSIBILITY OF A MEMBER OR ITS AUTHORIZED REPRESENTATIVE.

(d) *Totality of Duties.* Without limiting the generality of the foregoing, to the fullest extent permitted by Section 18-1101(c) of the Act, the Members agree that the foregoing subsections (a) and (b) describe in totality the fiduciary duties of the Manager to the Company and its Members, and of the Members to each other, and that the fiduciary duties of the Manager to the Company and its Members, or the Members to each other, shall not be those of a director to a corporation and its shareholders under the Delaware General Corporation Law or those of a partner to a partnership and its partners.

8.2 Limitation on Liability of Officers. No Authorized Representative or Officer shall have any liability to the Company or the Members for any losses sustained or liabilities incurred as a result of any act or omission of such Authorized Representative or Officer in connection with the conduct of the business of the Company if, (i) in the case of an Officer (other than an Officer that also is an officer of the Manager), the Officer acted in good faith in a manner he or she reasonably believed to be in, or not opposed to, the best interests of the Company or applicable law and to be within the scope of his or her authority and (ii) in the case of an Authorized Representative or Officer, the conduct did not constitute bad faith, fraud, negligence or willful misconduct. To the fullest extent permitted by Section 18-1101(c) of the Act, an Authorized Representative, in performing his or her obligations under this Agreement, shall be entitled to act or omit to act at the direction of the Member who designated such Authorized Representative, considering only such factors, including the separate interests of the designating Member, as such Authorized Representative or the designating Member chooses to consider, and any action of an Authorized Representative or failure to act, taken or omitted in good faith reliance on the foregoing provisions of this Section 8.2 shall not constitute a breach of any duty including any fiduciary duty on the part of the Authorized Representative or designating Member to the Company or any other Member or Authorized Representative. Except as required by the Act, the Company's debts, obligations, and liabilities, whether arising in contract, tort or otherwise, shall be solely the debts, obligations and liabilities of the Company, and no Officer, Manager, Member or Authorized Representative shall be personally responsible for any such debt, obligation or liability of the Company solely by reason of being an Officer, Manager, Member or Authorized Representative. The Class A Member(s) shall be liable to the Company for the Required Contributions specified in Section 3.2. No Member shall be responsible for any debts, obligations or liabilities, whether arising in contract, tort or otherwise, of any other Member.

8.3 Indemnification.

(a) The Company shall indemnify and hold harmless the Members (when not acting in violation of this Agreement or applicable law), Managers, Officers and Authorized Representatives (individually a "*Company Affiliate*") from and against any and all losses, claims, demands, costs, damages, liabilities, expenses of any nature (including reasonable attorneys' fees and disbursements), judgments, fines, settlements and other amounts arising from any and all claims, demands, actions, suits or proceedings, civil, criminal, administrative or investigative, in which a Company Affiliate may be involved, or threatened to be involved, as a party or otherwise, by reason of his, her or its status as a Company Affiliate, regardless of whether a Company Affiliate continues to be a Company Affiliate at the time any such liability or expense is paid or incurred, if such Company Affiliate acted in a manner consistent with its

obligations under this Agreement (including this Article 8) and with respect to any criminal proceeding, had no reason to believe his, her or its conduct was unlawful.

(b) Expenses incurred by a Company Affiliate in defending any claim, demand, action, suit or proceeding subject to Section 8.3(a) shall, from time to time, be advanced by the Company prior to the final disposition of such claim, demand, action, suit or proceeding upon receipt by the Company of an undertaking by or on behalf of the Company Affiliate to repay such amounts if it is ultimately determined that the Company Affiliate is not entitled to be indemnified as authorized in this Section 8.3.

(c) The indemnification provided by this Section 8.3 shall be in addition to any other rights to which a Company Affiliate may be entitled pursuant to any approval of each of the Initial Class B Members, as a matter of law or equity, or otherwise, and shall continue as to a Company Affiliate who has ceased to serve in such capacity and shall inure to the benefit of the heirs, successors, assigns, and administrators of such Company Affiliate. The Company shall not be required to indemnify any Member in connection with any losses, claims, demands, actions, disputes, suits or proceedings, of any Member against any other Member.

(d) The Company may purchase and maintain directors' and officers' insurance or similar coverage for its Officers in such amounts and with such deductibles or self-insured retentions as determined in the sole discretion of the Manager.

(e) Any indemnification hereunder shall be satisfied only out of the assets of the Company, and the Members shall not be subject to personal liability by reason of the indemnification provisions under this Section 8.3.

(f) A Company Affiliate shall not be denied indemnification in whole or in part under this Section 8.3 because the Company Affiliate had an interest in the transaction with respect to which the indemnification applies if the transaction was otherwise permitted by the terms of this Agreement and all material facts relating to such indemnitee's interest were adequately disclosed to the Manager at the time the transaction was consummated.

(g) Subject to Section 8.3(c), the provisions of this Section 8.3 are for the benefit of the Company Affiliates and the heirs, successors, assigns and administrators of the Company Affiliates and shall not be deemed to create any rights for the benefit of any other Persons.

(h) Any repeal or amendment of any provisions of this Section 8.3 shall be prospective only and shall not adversely affect any Company Affiliates' rights existing at the time of such repeal or amendment.

ARTICLE 9

TRANSFERS OF MEMBERSHIP INTERESTS

9.1 General.

(a) No Transfer of all or any part of a Member's Membership Interest to any Person shall be effective unless such Member (the "***Transferring Member***") first complies with all applicable provisions of this Article 9. Any purported Transfer of a Membership Interest or a

portion thereof in violation of the terms of this Agreement shall be null and void and of no force and effect. Except upon a Transfer of all or any portion of a Member's Membership Interest in accordance with this Article 9, no Member shall have the right to withdraw as a Member of the Company. In addition to any other restrictions on transfer herein contained, in no event may any transfer of a Membership Interest by any Member be made (and the Manager may prohibit any such transfer) if such transfer is effectuated through an "established securities market" or a "secondary market (or the substantial equivalent thereof)" within the meaning of Section 7704 of the Code, or causes the Partnership to become a "publicly traded partnership," as such term is defined in Section 7704(b) of the Code.

(b) Except in the case of a Transfer of Membership Interest to the Company, from and after the date on which a Transfer of Membership Interests becomes effective, the transferee of the Membership Interest, or portion thereof, so Transferred (the "***Transferee***") shall have the same rights, and shall be bound by the same obligations, under this Agreement as the transferor of such Membership Interest, or portion thereof, and shall be deemed for all purposes hereunder a Member and such Transferee shall, as a condition to such Transfer, agree in writing to be bound by the terms of this Agreement. No Transfer of Membership Interests shall conflict with or result in any violation of any judgment, order, decree, statute, law, ordinance, rule or regulation or require the Company, if not currently subject, to become subject, or if currently subject, to become subject to a greater extent, to any statute, law, ordinance, rule or regulation, excluding matters of a ministerial nature that are not materially burdensome to the Company.

(c) Unless and until admitted as a substitute Member pursuant to Section 9.2, a transferee of a Member's Membership Interest shall be an assignee with respect to such Transferred Membership Interest and shall not be entitled to participate in the management of the business and affairs of the Company or to become, or to exercise the rights of, a Member, including the right to vote, the right to require any information or accounting of the Company's business, or the right to inspect the Company's books and records. Such transferee shall only be entitled to receive the share of distributions and profits, including distributions representing the return of Capital Contributions, to which the transferor would otherwise be entitled. The transferor shall not have the right to vote such Transferred Membership Interest until the transferee is admitted to the Company as a substitute Member.

(d) Upon the consummation of a Transfer of a Membership Interest, (i) the Transferring Member shall deliver its Membership Interest duly endorsed, or accompanied by written instruments of transfer, in form and substance reasonably satisfactory to the Company, free and clear of any Encumbrances (unless such Transfer is otherwise being made in accordance with the terms of Section 9.9), and shall furnish such other evidence as may reasonably be necessary to effect the Transfer of such Membership Interest, and (ii) the Company shall cause its books and records to reflect such Transfer.

(e) Notwithstanding anything herein to the contrary, (i) in no event shall the Plan Sponsor Transfer any of its Membership Interests unless such proposed Transfer is either a Proposed 100% Transfer, a Proposed Qualifying Partial Transfer or a Drag-Along Transfer and such proposed Transfer is made in compliance with this Article 9 (including Section 9.8 or Section 9.9, as applicable); *provided, however*, that the Plan Sponsor may Transfer a portion or all of its Membership Interests to an Affiliate so long as such Transferee complies with the

provisions of this Agreement applicable to the Plan Sponsor, and (x) in no event shall such Transfer of Membership Interests to an Affiliate relieve the Plan Sponsor of any liability hereunder for breach of any provision of this Agreement, and (y) prior to such Transfer to an Affiliate being effective hereunder, such Transferee shall agree in writing that, if such Transferee ceases to be an Affiliate of the Plan Sponsor at any time, it shall promptly Transfer all such Membership Interests back to the Plan Sponsor (unless the transaction resulting in such change in Affiliate status is otherwise subject to Section 9.8), and (ii) the Liquidating Trust may Transfer any of the Class B Membership Interests held by it to any of the Liquidating Trust Beneficiaries at any time so long as such Liquidating Trust Beneficiaries agree to comply with the provisions of this Agreement applicable to the Liquidating Trust.

9.2 Substitute Members. No transferee of a Member's Membership Interest who is not already a Member shall become a substitute Member in place of the transferor unless and until:

(a) Such Transfer is in compliance with the terms of Section 9.1;

(b) the transferee has executed an instrument in form and substance reasonably satisfactory to the Manager accepting and adopting, and agreeing to be bound by, the terms and provisions of the Certificate of Formation and this Agreement; and

(c) the transferee has caused to be paid all reasonable expenses of the Company in connection with the admission of the transferee as a substitute Member.

Upon satisfaction of all the foregoing conditions with respect to a particular transferee, the Company shall cause its books and records to reflect the admission of the transferee as a substitute Member. If a Membership Interest is Transferred to an existing Member, the Company will adjust its books and records to reflect the Percentage Interest attributable to the Membership Interest so Transferred. For the avoidance of doubt, this Section 9.2 must be complied with in connection with all Transfers by the Liquidating Trust to any Liquidating Trust Beneficiaries.

9.3 Effect of Admission as a Substitute Member. A transferee who has become a substitute Member has all the rights, powers and benefits of, and is subject to the obligations, restrictions and liabilities of the transferor Member under, the Certificate of Formation, this Agreement and the Act. Upon admission of a transferee as a substitute Member, the transferor of the Membership Interest so held by the substitute Member shall cease to be a Member of the Company; *provided, however*, that the transferor of the Membership Interest shall continue to be bound by the provisions of Section 12.6 for a period of two years following such transfer.

9.4 Consent. Each Member hereby agrees that upon satisfaction of the terms and conditions of Section 9.2 with respect to any proposed Transfer, the transferee may be admitted as a Member without any further action by a Member hereunder.

9.5 No Dissolution. If a Member Transfers all of its Membership Interest pursuant to this Article 9 and the transferee of such Membership Interest is admitted as a Member pursuant to Section 9.2, such Person shall be admitted to the Company as a Member effective on the effective date of the Transfer and the Company shall not dissolve pursuant to Section 10.1.

9.6 Additional Members. Any Person acquiring Membership Interests from the Company may become an additional Member of the Company for such consideration as the Initial Class B Members shall determine, and such Person shall have such Percentage Interest as shall be determined in accordance with Section 3.2, *provided* that such additional Member complies with all the requirements of a transferee under Section 9.2(b) and (c); *provided, further*, that this Section 9.6 shall not apply to any Third Party purchasing Additional Issued Interests under Section 3.3.

9.7 Right of First Refusal. If the Liquidating Trust, or any such Liquidating Trust Beneficiaries, desires to Transfer their Membership Interest in whole or in part to any Third Party, the Liquidating Trust (on behalf of itself and the Liquidating Trust Beneficiaries) shall provide the Plan Sponsor with a notice setting forth the consideration to be paid for such Membership Interest and the other material terms and conditions of such proposed Transfer (such notice, the “**ROFR Notice**”). The Plan Sponsor may elect, by providing notice to the Liquidating Trust (on behalf of itself and the Liquidating Trust Beneficiaries) on or before the twentieth (20th) Business Day after delivery of the ROFR Notice, to purchase the Membership Interest (or portion thereof) described in the ROFR Notice on the same terms and subject to the same conditions as those set forth in the ROFR Notice. If the Plan Sponsor does not make such an election within the requisite 20 Business Day period after delivery of the ROFR Notice, or if, having made such an election, the Plan Sponsor fails to consummate such transaction on or before the 30th Business Day after the date of the ROFR Notice, the Liquidating Trust, or any such Liquidating Trust Beneficiaries, may Transfer the Membership Interest described in the ROFR Notice a Third Party at a price greater than or equal to that set forth in the ROFR Notice, *provided* that such Transfer is consummated within 180 days after the end of such 30 Business Day period.

9.8 Tag-Along Rights

(a) If the Plan Sponsor proposes to Transfer, directly or indirectly, all (but not less than all) of its Class B Membership Interest to any Person other than the Liquidating Trust (a “**Proposed 100% Transferee**”), the Plan Sponsor shall promptly provide the Liquidating Trust written notice (a “**100% Transfer Notice**”) of such proposed Transfer (a “**Proposed 100% Transfer**”) and all of the terms of the Proposed 100% Transfer as of the date of such 100% Transfer Notice. The Liquidating Trust may elect (on behalf of itself and the Liquidating Trust Beneficiaries who hold Class B Membership Interests), by sending notice the Plan Sponsor on or before the twentieth (20th) Business Day after the receipt of the 100% Transfer Notice (a “**100% Tag Notice**”), to include all of the Class B Membership Interests owned by it and the Liquidating Trust Beneficiaries in the Proposed 100% Transfer at the same price, on the same terms and subject to the same conditions as those set forth in the 100% Transfer Notice. If the Liquidating Trust has not accepted the offer contained in the 100% Transfer Notice by delivering a 100% Tag Notice the Plan Sponsor in the required time, the Liquidating Trust shall be deemed to have irrevocably waived its rights under this Section 9.8(a) with respect to such Proposed 100% Transfer, and the Plan Sponsor shall thereafter be free, for a period of 180 days from the date of the 100% Transfer Notice, to Transfer all (but not less than all) of its Class B Membership Interest to the Proposed 100% Transferee at the same price, on the same terms and subject to the same conditions as those set forth in the 100% Transfer Notice. Subject to Section 9.8(c), any 100% Tag Notice shall be irrevocable, and once received by the Plan Sponsor, the Liquidating

Trust shall be obligated to Transfer to the Proposed 100% Transferee all of the Class B Membership Interest owned by it and any Liquidating Trust Beneficiaries in accordance with this Section 9.8(a). In connection with the delivery of the 100% Tag Notice, the Company shall cause its books and records to show that such Membership Interests are bound by the provisions of this Section 9.8(a) and that such Membership Interests shall be Transferred to the Proposed 100% Transferee identified in the 100% Transfer Notice immediately upon surrender for Transfer by such holder. The Plan Sponsor shall not consummate any Proposed 100% Transfer without compliance with this Section 9.8(a), and the Company shall not recognize or give effect to any purported Transfer of the Plan Sponsor's Membership Interest not made in compliance with this Section 9.8(a).

(b) If the Plan Sponsor proposes to Transfer, directly or indirectly, a portion (but less than all) of its Membership Interests to any Person other than the Liquidating Trust (the "***Proposed Qualifying Partial Transferee***") in any sale the consummation of which would result in aggregate sales proceeds which, if distributed to the Members in accordance with Section 4.1, would cause the Trigger Threshold to have been met (a "***Proposed Qualifying Partial Transfer***"), the Plan Sponsor shall promptly provide the Liquidating Trust written notice (a "***Qualifying Partial Transfer Notice***") of such proposed Transfer and all of the terms of the Proposed Qualifying Partial Transfer as of the date of such Qualifying Partial Transfer Notice. If within twenty (20) Business Days of the receipt of the Qualifying Partial Transfer Notice, the Liquidating Trust sends the Plan Sponsor a written notice (a "***Qualifying Partial Tag Request***") requesting that it include the Qualifying Transfer Percentage of the Membership Interests held, directly or indirectly, by the Liquidating Trust and the Liquidating Trust Beneficiaries in the Proposed Qualifying Partial Transfer, the Liquidating Trust (on behalf of itself and the Liquidating Trust Beneficiaries) shall have the right to Transfer, at the same price, on the same terms and pursuant to the same conditions as the Proposed Qualifying Partial Transfer, the Qualifying Transfer Percentage of the Membership Interests owned by it and the Liquidating Trust Beneficiaries. If the Liquidating Trust has not accepted the offer contained in the Qualifying Partial Transfer Notice by delivering a Qualifying Partial Tag Request the Plan Sponsor in the required time, the Liquidating Trust shall be deemed to have irrevocably waived its rights under this Section 9.8(b) with respect to such Proposed Qualifying Partial Transfer, and the Plan Sponsor shall thereafter be free, for a period of 180 days from the date of the Qualifying Partial Transfer Notice, to Transfer the Membership Interest specified in the Qualifying Partial Transfer Notice upon the same terms and conditions set forth in the Qualifying Partial Transfer Notice. Subject to Section 9.8(c), any Qualifying Partial Tag Request shall be irrevocable, and once received by the Plan Sponsor, each of the Liquidating Trust and any Liquidating Trust Beneficiaries shall be obligated to Transfer to the Proposed Qualifying Partial Transferee the Qualifying Transfer Percentage of its respective Membership Interest in accordance with this Section 9.8(b). In connection with the delivery of the Qualifying Partial Tag Request, the Company shall cause its books and records to show that such Membership Interests are bound by the provisions of this Section 9.8(b) and that such Membership Interests shall be Transferred to the Proposed Qualifying Partial Transferee identified in the Qualifying Partial Transfer Notice immediately upon surrender for Transfer by such holder. The Plan Sponsor shall not consummate any Proposed Qualifying Partial Transfer without compliance with this Section 9.8(b), and the Company shall not recognize or give effect to any purported Transfer of the Plan Sponsor's Membership Interest not made in compliance with this Section 9.8(b).

(c) *Terms.* Membership Interests subject to a Tag Request will be included in a Proposed Transfer pursuant hereto and to any agreement with the Proposed Transferee relating thereto, on the same terms and subject to the same conditions applicable to the Membership Interests which the Transferring Member proposes to Transfer in the Proposed Transfer. Such terms and conditions shall be determined in the sole discretion of the Transferring Member, and shall include (i) the Transfer consideration and (ii) the provision of information, representations, warranties, covenants and requisite indemnifications; *provided, however*, that (x) if the terms set forth in such definitive documents differ in any material adverse respect (including any decrease in the economic terms) from the material terms set forth in the Transfer Notice with respect to such Proposed Transfer, then notwithstanding the delivery of a Tag Request with respect to such Proposed Transfer, the Members who submitted such Tag Request shall have the right to rescind such Tag Request by delivering written notice of such rescission to the Transferring Member within two Business Days of receipt of such definitive documents, and (y) any representations and warranties relating specifically to any Member shall only be made by that Member and any indemnification provided by the Members shall be on a several, not joint, basis and shall be based on the Percentage Interest being Transferred by each Member in the Proposed Transfer. In addition, each participating Member shall reimburse the Transferring Member for its proportionate share (based on consideration received) of the reasonable out-of-pocket costs and expenses incurred by the Transferring Member in connection with any such Proposed Transfer. Notwithstanding anything in this Agreement to the contrary, (i) no Transferring Member shall be permitted to engage in any Proposed Transfer that would otherwise be subject to this Section 9.8 unless the consideration to be paid in such Proposed Transfer consists solely of cash, and (ii) upon the consummation of any Proposed Transfer contemplated by this Section 9.8 all of the sales proceeds therefrom shall be distributed to the Members in accordance with Section 4.1 as if such sales proceeds were a distribution being made by the Company to the Members (calculated after taking into account any prior distributions made by the Company to the Members thereunder).

9.9 Drag-Along Rights.

(a) If the Plan Sponsor elects to Transfer all (but not less than all) of its Class B Membership Interest to any Person other than the Liquidating Trust (a “**Drag-Along Purchaser**”) in a bona fide arm’s-length transaction, the Plan Sponsor has the right (“**Drag Right**”) to require each other Class B Member(s) (each a “**Dragged Member**”) to Transfer all (but not less than all) of its Class B Membership Interest in such transaction on the same terms and conditions as those applicable the Plan Sponsor (a “**Drag-Along Transfer**”).

(b) The Plan Sponsor may exercise its Drag Right by providing written notice (a “**Drag Notice**”) to each Dragged Member prior to the execution of a definitive agreement to Transfer all of its Class B Membership Interest, which Drag Notice shall (i) include a draft of the agreement pursuant to which such Class B Membership Interest is proposed to be Transferred, and (ii) state (A) the name and address of the Drag-Along Purchaser, (B) the material terms and conditions (including the price) of the contemplated Transfer, (C) the expected closing date of such transaction, and (D) a certification that the proviso at the end of Section 9.9(a) will be satisfied by the Transfer.

(c) Within ten Business Days following the receipt of the Drag Notice, each Dragged Member shall deliver to the Plan Sponsor, or its representative designated in the Drag Notice, if any, written instruments of Transfer for the Class B Membership Interests subject to such Transfer, together with any other documents reasonably required to be executed in connection with such Transfer. If any Dragged Member should fail to deliver such certificates or instruments of transfer the Plan Sponsor (or its representative), the Company shall cause its books and records to show that such Class B Membership Interests are subject to the provisions of this Section 9.9 and that such Class B Membership Interests shall be transferred to the transferee identified in the Drag Notice immediately upon surrender for transfer by such holder.

(d) Interests subject to this Section 9.9 will be included in a proposed Transfer pursuant hereto and be subject to any agreement with the Drag-Along Purchaser relating thereto, on the same terms and subject to the same conditions applicable to the Class B Membership Interests that the Plan Sponsor proposes to Transfer in such transaction. Subject to Section 9.9(a), such terms and conditions shall be determined in the sole discretion of the Plan Sponsor, and shall include (i) the Transfer consideration and (ii) the provision of information, representations, warranties, covenants and requisite indemnifications; provided, that all representations, warranties, covenants and indemnities shall be made by the Plan Sponsor and each Dragged Member severally and not jointly and any indemnification obligation shall be pro rata based on the consideration received by the Plan Sponsor and each other Dragged Member, in each case in an amount not to exceed the aggregate proceeds received by the Plan Sponsor and each such other Dragged Member in connection with the Transfer. Notwithstanding anything in this Agreement to the contrary, (i) the Plan Sponsor Member shall not be permitted to engage in any Drag-Along Transfer that would otherwise be subject to this Section 9.9 unless the consideration to be paid in such Drag-Along Transfer consists solely of cash, and (ii) upon the consummation of a Drag-Along Transfer contemplated by this Section 9.9 all of the sales proceeds therefrom shall be distributed to the Members in accordance with Section 4.1 as if such sales proceeds were a distribution being made by the Company to the Members (calculated after taking into account any prior distributions made by the Company to the Members thereunder).

9.10 Put Rights.

(a) For (i) a thirty (30) day period commencing on the date that is nine (9) months following the Effective Date (the “**First Put Option Period**”) and (ii) a thirty (30) day period commencing on the date that is seventeen (17) months following the Effective Date (the “**Second Put Option Period**”), the Liquidating Trust (on behalf of itself and the Liquidating Trust Beneficiaries) shall have the right and option to sell, and to cause the Plan Sponsor to purchase, up to one hundred percent (100%) of the Class B Membership Interest held by the Liquidating Trust and the Liquidating Trust Beneficiaries in increments equal to twenty-five percent (25%) of the aggregate Class B Membership Interests held by the Liquidating Trust and the Liquidating Trust Beneficiaries as of the Effective Date (and its permitted transferees in accordance with Article 9) at a purchase price equal to the Put Price (as defined below). The right of the Liquidating Trust set forth in this Section 9.10 to sell, and to cause the Plan Sponsor to purchase, the Class B Membership Interests (and the Class B Membership Interests of its permitted transferees) is referred to as the “**Put Option**”.

(b) The Put Option shall be exercised by written notice to the Plan Sponsor signed by a trustee of the Liquidating Trust on behalf of the Liquidating Trust and the Liquidating Trust Beneficiaries (the “**Put Option Notice**”). The Put Option Notice shall set forth (i) the number of Class B Membership Interest desired to be sold, *provided, however*, that the Liquidating Trust may only exercise its Put Option in increments equal to twenty-five percent (25%) of the aggregate Class B Membership Interests held by the Liquidating Trust and the Liquidating Trust Beneficiaries as of the Effective Date, (ii) the consideration to be paid for such Class B Membership Interests (determined in accordance with Section 9.10(c)), and (iii) a time and place of closing which shall be no later than twenty (20) Business Days after the date the Put Option Notice is sent. At such closing, the Liquidating Trust and the Liquidating Trust Beneficiaries, if applicable, shall deliver the certificates (if any) evidencing the number of Class B Membership Interests to be purchased by the Plan Sponsor, accompanied by duly executed instruments of transfer, and any other documents that are necessary to transfer to the Plan Sponsor title to such of the Class B Membership Interests to be transferred, free and clear of all Encumbrances of whatever nature other than those imposed under this Agreement or incurred at the request of the Company, and concurrently with such delivery, the Plan Sponsor shall deliver to the Liquidating Trust and the Liquidating Trust Beneficiaries, as applicable and in proportionate part based on the sale percentages, the full amount of the Put Option Price for such Class B Membership Interests by certified or bank cashier’s check or wire transfer. The Plan Sponsor shall be entitled to receive customary representations and warranties from the Liquidating Trust and any Liquidating Trust Beneficiaries (on a several and not joint basis) regarding their respective ownership of the Class B Membership Interests, such as those regarding enforceability, authority, good title and absence of liens and Encumbrances in connection with any Class B Membership Interest sold pursuant to this Section 9.10.

(c) The “**Put Price**” for each twenty-five percent (25%) allotment of Class B Membership Interests to be purchased by the Plan Sponsor pursuant to the Put Option shall be:

(i) \$1,400,000 if any exercises occur during the First Put Option Period; or

(ii) \$1,800,000 if any exercises occur during the Second Put Option Period.

(d) If at any time, as a result of one or more exercises of the Put Right, the Liquidating Trust, together with the Liquidating Trust Beneficiaries, sells, and causes the Plan Sponsor to purchase, an amount equal to fifty percent (50%) or more of the Class B Membership Interests held by the Liquidating Trust as of the Effective Date, the rights and obligations created by Section 7.4 shall automatically terminate and be of no further force without any further action by the Members.

(e) Schedule 3.1 shall be updated periodically by the Manager to reflect any changes in the Percentage Interests of the Plan Sponsor and the Liquidating Trust, as applicable, resulting from any exercise of the Put Option.

9.11 Call Rights.

(a) At any time after the Effective Date, Plan Sponsor shall have the right and option to purchase all, but not less than all, of the then-outstanding Class B Membership Interests held by the Liquidating Trust (and its permitted transferees in accordance with Article 9, including the Liquidating Trust Beneficiaries) at a purchase price equal to the Call Price (as defined below). The right of the Plan Sponsor set forth in this Section 9.11 to purchase the Class B Membership Interests of the Liquidating Trust (and the Class B Membership Interests of its permitted transferees) is referred to as the “**Call Option**”.

(b) The Call Option shall be exercised by written notice to the Liquidating Trust signed by an officer of the Plan Sponsor on behalf of the Plan Sponsor (the “**Call Option Notice**”). The Call Option Notice shall set forth (i) the number of Class B Membership Interests desired to be purchased, which shall be all of the then-outstanding Class B Membership Interests held by the Liquidating Trust and any of its permitted transferees, (ii) the consideration to be paid for such Class B Membership Interests, including the relevant valuation of the Company determined in accordance with Section 9.11(c), and (iii) a time and place of closing which shall be no later than twenty (20) Business Days after the date such notice is sent. At such closing, the Liquidating Trust shall deliver the certificates (if any) evidencing the number of Class B Membership Interests to be purchased by the Plan Sponsor, accompanied by duly executed instruments of transfer, and any other documents that are necessary to transfer to the Plan Sponsor title to such of the Class B Membership Interests to be transferred, free and clear of all Encumbrances of whatever nature other than those imposed under this Agreement or incurred at the request of the Company, and concurrently with such delivery, the Plan Sponsor shall deliver to the Liquidating Trust and any Liquidating Trust Beneficiaries (if applicable) the full amount of the Call Option Price for such Class B Membership Interests by certified or bank cashier’s check or wire transfer. The Plan Sponsor shall be entitled to receive customary representations and warranties from the Liquidating Trust and any Liquidating Trust Beneficiaries (on a several and not joint basis) regarding their respective ownership of the Class B Membership Interests, such as those regarding enforceability, authority, good title and absence of liens and Encumbrances in connection with any Class B Membership Interest sold pursuant to this Section 9.11.

(c) The “**Call Price**” for the Class B Membership Interests to be purchased by the Plan Sponsor pursuant to the Call Option shall (i) be determined as of the applicable date of the Call Option Notice and (ii) equal to the sum of (A) the greater of (y) the Fair Market Value of the Class B Membership Interests as determined by the Appraiser and (z) the value of the Class B Membership Interests assuming an equity value of the Company equal to \$50,000,000 plus (B) \$1,000,000. The costs, fees and expenses related to such appraisal shall be paid by the Plan Sponsor and the Liquidating Trust in proportion to their respective Class B Percentage Interests.

(d) If, within eighteen (18) months following any exercise of the Call Option, the Plan Sponsor sells all or substantially all its Class B Membership Interests to a third-party at a price that reflects a higher valuation of the Company than what was stated in the Call Option Notice (the “**Make-Whole Valuation**”), the Plan Sponsor shall pay to the Liquidating Trust and any Liquidating Trust Beneficiaries (if applicable) concurrently at the time of the closing of such sale an amount equal to the excess of (i) the purchase price for which the Liquidating Trust’s

Class B Membership Interest would have been acquired if the Call Option had been exercised based upon the Make-Whole Valuation over (ii) the Call Price paid pursuant to the exercise of the Call Option.

(e) Schedule 3.1 shall be updated periodically by the Manager to reflect any changes in the Percentage Interests of the Plan Sponsor and the Liquidating Trust, as applicable, resulting for any exercise of the Call Option.

9.12 Remedies. Each of the Members acknowledges that damages may not be an adequate compensation for the losses which may be suffered by the Company or the other Member as a result of the breach by a Member of the covenants contained in this Article 9 and that the Company and the other Member shall be entitled to seek specific performance or injunctive relief with respect to any such breach in lieu of or in addition to any recourse in damages without the posting of a bond or other security.

ARTICLE 10 DISSOLUTION AND TERMINATION

10.1 Events Causing Dissolution.

(a) The Company shall be dissolved and its affairs wound up upon the first to occur of the following events:

- (i) The written consent of the Initial Class B Members to dissolve;
- (ii) The Transfer of all or substantially all of the assets of the Company and the receipt and distribution of all the proceeds therefrom; or
- (iii) The entry of a decree of judicial dissolution pursuant to Section 18-802 of the Act.

(b) The withdrawal, death, retirement, resignation, expulsion, bankruptcy or dissolution of any Member or the occurrence of any other event that terminates the continued membership of any Member in the Company shall not, in and of itself, cause the Company's dissolution.

10.2 Final Accounting. Upon dissolution and winding up of the Company, an accounting will be made of the accounts of the Company and each Member and of the Company's assets, liabilities and operations from the date of the last previous accounting to the date of such dissolution.

10.3 Distributions Following Dissolution and Termination.

(a) Liquidator. Upon the dissolution of the Company, such party as is designated by the Members will act as liquidator of the Company and proceed to wind up the business and affairs of the Company in accordance with the terms of this Agreement and applicable law. The liquidator will use its reasonable best efforts to sell all Company assets (except cash) in the exercise of its best judgment under the circumstances then presented, that it deems in the best

interest of the Members. The liquidator will attempt to convert all assets of the Company to cash so long as it can do so consistently with prudent business practice. The Members and their respective designees will have the right to purchase any Company property to be sold on liquidation, *provided* that the terms on which such sale is made are no less favorable than would otherwise be available from third parties. The gains and losses from the sale of the Company assets, together with all other revenue, income, gain, deduction, expense, loss and credit during the period, will be allocated in accordance with Article 5. A reasonable amount of time shall be allowed for the period of winding up in light of prevailing market conditions and so as to avoid undue loss in connection with any sale of Company assets. This Agreement shall remain in full force and effect during the period of winding up. In addition, upon request of any Member and if the liquidator determines that it would be imprudent to dispose of any non-cash assets of the Company, such assets may be distributed in kind to the Members in lieu of cash, proportionately to their right to receive cash distributions hereunder.

(b) Accounting. The liquidator will then cause proper accounting to be made of the Capital Account of each Member, including recognition of gain or loss on any asset to be distributed in kind as if such asset had been sold for consideration equal to the fair market value of the asset at the time of the distribution. The Members intend that the allocations provided herein shall result in Capital Account balances in proportion to the Percentage Interests of the Members.

(c) Distributions Following Dissolution. In settling accounts after dissolution of the Company, the assets of the Company shall be paid to creditors of the Company and to the Members in the following order:

(i) to creditors of the Company (including Members) in the order of priority as provided by law whether by payment or the making of reasonable provision for payment thereof (except with respect to the Plan Sponsor Note in the event of a voluntary or involuntary case under chapter 7 of the Bankruptcy Code, in which case the payees of the Plan Sponsor Note shall have the priority specified therein), and in connection therewith there shall be withheld such reasonable reserves for contingent, conditioned or unconditioned liabilities as the liquidator in its reasonable discretion deems adequate, such reserves (or balances thereof) to be held and distributed in such manner and at such times as the liquidator, in its discretion, deems reasonably advisable; *provided, however*, that such amounts be maintained in a separate bank account and that any amounts in such bank account remaining after three years be distributed to the Members or their successors and assigns as if such amount had been available for distribution under Section 10.3(c)(ii); and then

(ii) the balance of the proceeds shall be distributed to the Members in accordance with the provisions of Section 4.1 (subject to the priority of any payments owed to creditors that have not been made pursuant to Section 10.3(c)(i), including payments owed under the Plan Sponsor Note).

(d) The provisions of this Agreement, including this Section 10.3, are intended solely to benefit the Members and, to the fullest extent permitted by law, shall not be construed as conferring any benefit upon any creditor of the Company, and no such creditor of the Company shall be a third-party beneficiary of this Agreement, and no Member shall have any

duty or obligation to any creditor of the Company to issue any call for capital pursuant to this Agreement.

10.4 Termination of the Company. The Company shall terminate when all assets of the Company, after payment or due provision for all debts, liabilities and obligations of the Company, shall have been distributed to the Members in the manner provided for in this Article 10, and the Certificate of Formation shall have been canceled in the manner required by the Act.

10.5 No Action for Dissolution. The Members acknowledge that irreparable damage would be done to the goodwill and reputation of the Company if any Member should bring an action in court to dissolve the Company under circumstances where dissolution is not required by Section 10.1. Accordingly, except where the Members have failed to cause the liquidation of the Company as required by Section 10.1 and except as specifically provided in Section 18-802 of the Act, each Member hereby to the fullest extent permitted by law waives and renounces its right to initiate legal action to seek dissolution of the Company or to seek the appointment of a receiver or trustee to wind up the affairs of the Company, except in the cases of fraud, violation of law, bad faith, gross negligence, willful misconduct or willful violation of this Agreement.

ARTICLE 11 TAX MATTERS

11.1 Tax Matters Member.

(a) The Manager is (i) hereby designated with respect to all taxable years to which the TEFRA Rules apply, the “Tax Matters Partner” of the Company, as provided under Section 6231 of the TEFRA Rules and the Regulations thereunder (the “Tax Matters Member”) and (ii) with respect to all taxable years to which the BBA Rules apply, shall be entitled to appoint the “Partnership Representative” of the Company, as provided under Section 6223 of the BBA Rules (the “Company Representative”). Each Member expressly consents to such designation and agrees that, upon the request of the Manager, it will execute, acknowledge, deliver, file and record at the appropriate public offices such documents as may be necessary or appropriate to evidence such consent. The Manager is specifically directed and authorized to take whatever steps the Manager in its discretion deems necessary or desirable to perfect such designation, including filing any forms or documents with the Internal Revenue Service and taking such other action as the Manager in its discretion determines may from time to time be required or advisable under the Regulations. The Tax Matters Member and the Company Representative shall have the power and perform the obligations required of a tax matters partner or partnership representative, as applicable, to the extent and in the manner provided by applicable Code sections and Regulations, including representing the Company, at the Company’s expense, before any taxing authority and court in any audit or proceeding affecting tax matters of the Company. A Class B Majority in Interest shall have the authority to remove or replace the Tax Matters Member and the Company Representative and designate their successors; provided that such Class B Majority in Interest shall include each Initial Class B Member.

(b) The Company shall not make any election or otherwise take any action to cause the BBA Rules to apply to the Company or any of its applicable subsidiaries at any earlier

date than required by law. For taxable years to which the BBA Rules apply, the Members acknowledge and agree that it is the intention of the Manager to minimize any obligations of the Company to pay taxes, interest and penalties in connection with any audit of the Company, including by means of elections under Section 6226 of the BBA Rules and/or the Members filing amended tax returns under Section 6225(c)(2) of the BBA Rules or other similar available elections. Notwithstanding the foregoing, the financial burden of any “imputed underpayment” within the meaning of Section 6225 of the BBA Rules paid (or payable) by the Company as a result of an adjustment with respect to any item, including any interest or penalties with respect to any such adjustment (collectively, an “Imputed Underpayment Amount”) shall be borne by the Members and former Members based on the extent such Imputed Underpayment Amount is attributable to such Member or former Member in respect of an interest in the Company held by such Member or former Member during the applicable “reviewed year” (within the meaning of Section 6225(d) of the Code). The Manager shall reasonably determine the portion of an Imputed Underpayment Amount attributable to each Member and/or former Member. To the extent feasible, this requirement shall be implemented through adjustments to distributions, but Members and former Members shall be obligated to indemnify and hold harmless the Company to the extent this requirement cannot be so implemented. Any portion of an Imputed Underpayment Amount that the Manager attributes to a former Member of the Company shall be an obligation of such former Member and any third-party transferee or assignee of such former Member. Imputed Underpayment Amounts also shall include any imputed underpayment within the meaning of Section 6225 of the BBA Rules paid (or payable) by any entity treated as a partnership for U.S. federal income tax purposes in which the Company holds (or has held) a direct or indirect interest other than through entities treated as corporations for U.S. federal income tax purposes to the extent that the Company bears the economic burden of such amounts, whether by law or contract.

11.2 Certain Authorizations. The Tax Matters Member or Company Representative shall represent the Company, at the Company’s expense, in connection with all examinations of the Company’s affairs by tax authorities including any resulting administrative or judicial proceedings. Without limiting the generality of the foregoing, and subject to the restrictions set forth herein, the Tax Matters Member or Company Representative is hereby authorized:

(a) to enter into any settlement agreement with respect to any tax audit or judicial review, in which agreement the Tax Matters Member or Company Representative may expressly state that such agreement shall bind the other Members except that such settlement agreement shall not bind any Member that has not approved such settlement agreement in writing;

(b) if a notice of a final administrative adjustment at the Company level of any item required to be taken into account by a Member for tax purposes is mailed to the Tax Matters Member or Company Representative, to seek judicial review of such final adjustment, including the filing of a petition for readjustment with the Tax Court, the District Court of the United States for the district in which the Company’s principal place of business is located, or elsewhere as allowed by law, or the United States Claims Court;

(c) to intervene in any action brought by any other Member for judicial review of a final adjustment;

(d) to file a request for an administrative adjustment at any time and, if any part of such request is not allowed, to file a petition for judicial review with respect to such request;

(e) to enter into an agreement with the Internal Revenue Service to extend the period for assessing any tax that is attributable to any item required to be taken into account by a Member for tax purposes, or an item affected by such item; and

(f) to take any other action on behalf of the Members (with respect to the Company) or the Company in connection with any administrative or judicial tax proceeding to the extent permitted by applicable law or the Regulations.

Each Member shall have the right to participate in any such actions and proceedings to the extent provided for under the Code and Regulations.

11.3 Indemnity of Tax Matters Member. To the maximum extent permitted by applicable law and without limiting Article 8, the Company shall indemnify and reimburse the Tax Matters Member or Company Representative for all expenses (including reasonable legal and accounting fees) incurred as Tax Matters Member or Company Representative pursuant to this Article 11 in connection with any administrative or judicial proceeding with respect to the tax liability of the Members as long as the Tax Matters Member or Company Representative has determined in good faith that the Tax Matters Member's or the Company Representative's course of conduct was in, or not opposed to, the best interest of the Company. The taking of any action and the incurring of any expense by the Tax Matters Member or Company Representative in connection with any such proceeding, except to the extent provided herein or required by law, is a matter in the sole discretion of the Tax Matters Member or Company Representative.

11.4 Information Furnished. To the extent and in the manner provided by applicable law and Regulations, the Tax Matters Member or Company Representative shall furnish the name, address, profits and loss interest, and taxpayer identification number of each Member to the Internal Revenue Service.

11.5 Notice of Proceedings, etc. The Tax Matters Member or Company Representative shall use its reasonable best efforts to keep each Member informed of any administrative and judicial proceedings for the adjustment at the Company level of any item required to be taken into account by a Member for income tax purposes or any extension of the period of limitations for making assessments of any tax against a Member with respect to any Company item, or of any agreement with the Internal Revenue Service that would result in any material change either in Profits or Losses as previously reported.

11.6 Notices to Tax Matters Member. Any Member that receives a notice of an administrative proceeding under Section 6223 of the Code relating to the Company shall promptly provide Notice to the Tax Matters Member or Company Representative of the treatment of any Company item on such Member's federal income tax return that is or may be inconsistent with the treatment of that item on the Company's return. Any Member that enters into a settlement agreement with the Internal Revenue Service or any other government agency or official with respect to any Company item shall provide Notice to the Tax Matters Member of such agreement and its terms within sixty (60) days after the date of such agreement.

11.7 Preparation of Tax Returns. The Tax Matters Member or Company Representative shall arrange for the preparation and timely filing of all returns of Company income, gains, deductions, losses and other items necessary for federal, state and local income tax purposes and shall use all reasonable efforts to furnish to the Members within ninety (90) days of the close of the taxable year a Schedule K-1 and such other tax information reasonably required for federal, state and local income tax reporting purposes. The classification, realization and recognition of income, gain, losses and deductions and other items shall be on the cash or accrual method of accounting for federal income tax purposes, as the Manager shall determine in its sole discretion in accordance with applicable law.

11.8 Tax Elections. Subject to Section 11.9, a Class B Majority in Interest shall, in its sole discretion, determine whether to make or revoke any available election, including, but not limited to the election under Code Section 754.

11.9 Taxation as a Partnership. No election shall be made by the Company or any Member for the Company to be excluded from the application of any of the provisions of Subchapter K, Chapter I of Subtitle A of the Code or from any similar provisions of any state tax laws or to be treated as a corporation for federal tax purposes.

ARTICLE 12 ACCOUNTING AND BANK ACCOUNTS

12.1 Fiscal Year and Accounting Method. The fiscal year and taxable year of the Company shall be the calendar year. The Company shall use an accrual method of accounting.

12.2 Books and Records. The Company shall maintain at its principal office, or such other office as may be determined by the Manager, all the following:

(a) A current list of the full name and last known business or residence address of each Member, together with information regarding the amount of cash and a description and statement of the agreed value of any other property or services contributed by each Member and which each Member has agreed to contribute in the future, and the date on which each Member became a Member of the Company;

(b) A copy of the Certificate of Formation and this Agreement, including any and all amendments to either thereof, together with executed copies of any powers of attorney pursuant to which the Certificate of Formation, this Agreement, or any amendments have been executed;

(c) Copies of the Company's federal, state, and local income tax or information returns and reports and all other information reasonably required for tax filing purposes, which shall be retained for at least six fiscal years;

(d) The financial statements of the Company described in Section 12.4; and

(e) The Company's books and records.

12.3 Delivery to Members; Inspection. Upon the request of any Member, for any purpose reasonably related to such Member's interest as a member of the Company, the Manager shall cause to be made available to the requesting Member the information required to be maintained by clauses (a) through (e) of Section 12.2 and such other information regarding the business and affairs and financial condition of the Company as any Member may reasonably request.

12.4 Financial Statements. Within 90 days after the end of each fiscal year, the Manager shall cause to be prepared and delivered to each Member, at the Company's expense, annual financial statements for such year of the Company, and its Subsidiaries (if any), prepared in accordance with GAAP and audited by a nationally recognized accounting firm. The financial statements so furnished shall include a balance sheet, statement of income or loss, statement of cash flows, and statement of Members' equity. In addition, within 45 days after the end of each calendar month, the Manager shall provide on a timely basis to the Members monthly financial statements, statements of cash flow, any available internal budgets or forecast or other available financial reports for such month, as well as any reports or notices as are provided by the Company, or any of its Subsidiaries to any financial institution.

12.5 Filings. At the Company's expense, the Manager shall cause the income tax returns for the Company to be prepared and timely filed with the appropriate authorities and to have prepared and to furnish to each Member such information with respect to the Company as is necessary (or as may be reasonably requested by a Member) to enable the Members to prepare their federal, state and local income tax returns. The Manager, at the Company's expense, shall also cause to be prepared and timely filed, with appropriate federal, state and local regulatory and administrative bodies, all reports required to be filed by the Company with those entities under then current applicable laws, rules, and regulations. The reports shall be prepared on the accounting or reporting basis required by the regulatory bodies.

12.6 Non-Disclosure. Each Member agrees that, except as otherwise consented to by each non-disclosing Member in writing, all non-public and confidential information furnished to it pursuant to this Agreement will be kept confidential and will not be disclosed by such Member, or by any of its agents, representatives, or employees, in any manner whatsoever, in whole or in part, except that (a) each Member shall be permitted to disclose such information to those of its agents, representatives, and employees who need to be familiar with such information in connection with such Member's investment in the Company (collectively, "**Representatives**") and are apprised of the confidential nature of such information, (b) each Member shall be permitted to disclose information to the extent required by law, legal process, regulatory requirements or applicable stock exchange requirements, so long as (in the case of legal process) such Member shall have used its reasonable efforts to first afford the other Members with a reasonable opportunity to contest the necessity of disclosing such information, (c) each Member shall be permitted to disclose such information to possible purchasers of all or a portion of the Member's Membership Interest, *provided* that such prospective purchaser shall execute a suitable confidentiality agreement in a form approved by the Company containing terms not less restrictive than the terms set forth herein, (d) each Member shall be permitted to disclose information to the extent necessary for the enforcement of any right of such Member arising under this Agreement, and (e) the Liquidating Trust shall be permitted to disclose information to

the Liquidating Trust Beneficiaries. Each Member shall be responsible for any breach of this Section 12.6 by its Representatives.

ARTICLE 13 MISCELLANEOUS

13.1 Waiver of Default. No consent or waiver, express or implied, by the Company or a Member with respect to any breach or default by the Company or a Member hereunder shall be deemed or construed to be a consent or waiver with respect to any other breach or default by any party of the same provision or any other provision of this Agreement. Failure on the part of the Company or a Member to complain of any act or failure to act of the Company or a Member or to declare such party in default shall not be deemed or constitute a waiver by the Company or the Member of any rights hereunder.

13.2 Amendment.

(a) Except as otherwise expressly provided elsewhere in this Agreement, this Agreement shall not be altered, modified or changed except by an amendment approved by the Manager.

(b) In addition to any amendments otherwise authorized herein, the Manager may make any amendments to any of the Schedules to this Agreement from time to time to reflect transfers of Membership Interests and issuances of additional Membership Interests. Copies of such amendments shall be delivered to the Members upon execution thereof.

(c) The Manager shall cause to be prepared and filed any amendment to the Certificate of Formation that may be required to be filed under the Act as a consequence of any amendment to this Agreement.

(d) Any modification or amendment to this Agreement or the Certificate of Formation made in accordance with this Section 13.2 shall be binding on all Members and the Manager.

13.3 No Third Party Rights. Except as provided in Article 8, none of the provisions contained in this Agreement shall be for the benefit of or enforceable by any third parties, including creditors of the Company.

13.4 Severability. In the event any provision of this Agreement is held to be illegal, invalid or unenforceable to any extent, the legality, validity and enforceability of the remainder of this Agreement shall not be affected thereby and shall remain in full force and effect and shall be enforced to the greatest extent permitted by law.

13.5 Nature of Interest in the Company. A Member's Membership Interest shall be personal property for all purposes.

13.6 Binding Agreement. Subject to the restrictions on the disposition of Membership Interests herein contained, the provisions of this Agreement shall be binding upon, and inure to

the benefit of, the parties hereto and their respective heirs, personal representatives, successors and permitted assigns.

13.7 Headings. The headings of the sections of this Agreement are for convenience only and shall not be considered in construing or interpreting any of the terms or provisions hereof.

13.8 Word Meanings. The words “herein”, “hereinafter”, “hereof”, and “hereunder” refer to this Agreement as a whole and not merely to a subdivision in which such words appear unless the context otherwise requires. The singular shall include the plural, and vice versa, unless the context otherwise requires. Whenever the words “include,” “includes” or “including” are used in this Agreement, they shall be deemed to be followed by the words “without limitation.” When verbs are used as nouns, the nouns correspond to such verbs and vice versa.

13.9 Counterparts. This Agreement may be executed in several counterparts, all of which together shall constitute one agreement binding on all parties hereto, notwithstanding that all the parties have not signed the same counterpart.

13.10 Entire Agreement. This Agreement contains the entire agreement between the parties hereto with respect to the subject matter hereof and supersedes all prior writings or agreements between the parties with respect to the subject matter hereof, including the Prior Agreement.

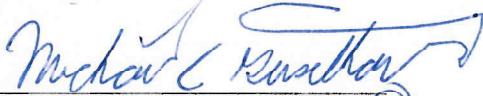

13.11 Partition. The Members agree that the Property is not and will not be suitable for partition. Accordingly, each of the Members hereby irrevocably waives any and all right such Member may have to maintain any action for partition of any of the Property. No Member shall have any right to any specific assets of the Company upon the liquidation of, or any distribution from, the Company.

13.12 Governing Law; Consent to Jurisdiction and Venue. This Agreement shall be construed according to and governed by the laws of the State of Delaware without regard to principles of conflict of laws. The parties hereby submit to the exclusive jurisdiction and venue of the Court of Chancery of the State of Delaware and the United States District Court for the District of Delaware, as the case may be, and agree that the Company or Members may, at their option, enforce their rights hereunder in such courts.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties have caused this Agreement to be duly executed as of the date first written above.

BELLE BUTTE LLC

By: 
Name: Michael Geiselhart 
Title: President

RYCKMAN CREDITOR TRUST

By: JLL Consultants, Inc., as Trustee

By: 

Name: William Kaye

Title: Managing Director



Spire Storage West LLC
Clear Creek Expansion Project
Docket No. CP21-____-000
Exhibit B

**SPIRE STORAGE WEST LLC
CLEAR CREEK EXPANSION PROJECT**

EXHIBIT B
STATE AUTHORIZATIONS

Delaware

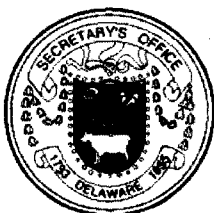
Page 1

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY "SPIRE STORAGE WEST LLC" IS DULY FORMED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD STANDING AND HAS A LEGAL EXISTENCE SO FAR AS THE RECORDS OF THIS OFFICE SHOW, AS OF THE TWENTY-FIRST DAY OF MAY, A.D. 2018.

AND I DO HEREBY FURTHER CERTIFY THAT THE SAID "SPIRE STORAGE WEST LLC" WAS FORMED ON THE SECOND DAY OF SEPTEMBER, A.D. 2009.

AND I DO HEREBY FURTHER CERTIFY THAT THE ANNUAL TAXES HAVE BEEN PAID TO DATE.



4726737 8300B

SR# 20184047570

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

A handwritten signature in black ink, appearing to read "JBULLOCK", is written over a horizontal line. Below the line, the text "Jeffrey W. Bullock, Secretary of State" is printed.

Authentication: 202733668

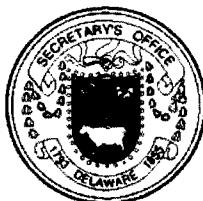
Date: 05-21-18

Delaware

Page 1

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "RYCKMAN CREEK RESOURCES, LLC", CHANGING ITS NAME FROM "RYCKMAN CREEK RESOURCES, LLC" TO "SPIRE STORAGE WEST LLC", FILED IN THIS OFFICE ON THE FIRST DAY OF MAY, A.D. 2018, AT 4 O`CLOCK P.M.




Jeffrey W. Bullock, Secretary of State

4726737 8100
SR# 20184047409

Authentication: 202733651
Date: 05-21-18

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

STATE OF DELAWARE
CERTIFICATE OF AMENDMENT
OF

Ryckman Creek Resources, LLC

1. Name of Limited Liability Company: Ryckman Creek Resources, LLC
2. The Certificate of Formation of the limited liability company is hereby amended as follows: The name of the Limited Liability Company is being changed to:
Spire Storage West LLC

[set forth amendment(s)]

IN WITNESS WHEREOF, the undersigned have executed this Certificate on the 30th day of April, A.D. 2018.

By: Ellen L. Theroff
Authorized Person(s)

Ellen L. Theroff for Belle Butte LLC, Manager
Name: _____

Print or Type



Office of the Secretary of State

January 08, 2019

Attn: InCorp Services, Inc.

InCorp Services, Inc.
3773 Howard Hughes Pkwy, Ste 500S
Las Vegas, NV 89169 USA

RE: SPIRE STORAGE WEST LLC
File Number: 803203875

It has been our pleasure to file the application for registration and issue the enclosed certificate of filing evidencing the authority of the foreign limited liability company (llc) to transact business in Texas.

Unless exempted, the foreign entity is subject to state tax laws, including franchise tax laws. Shortly, the Comptroller of Public Accounts will be contacting the entity at its registered office for information that will assist the Comptroller in setting up the franchise tax account for the foreign entity. Information about franchise tax, and contact information for the Comptroller's office, is available on their web site at <http://window.state.tx.us/taxinfo/franchise/index.html>.

The registered foreign entity is not required to file annual reports with the Secretary of State. An application for amended registration must be filed with the Secretary of State if the foreign entity changes its name, changes the purposes to be pursued in Texas, or changes the assumed name it elected to use on its application for registration. It is important for the foreign entity to continuously maintain a registered agent and office in Texas. Failure to maintain an agent or office or file a change to the information in Texas may result in the revocation of the entity's registration by the Secretary of State.

If we can be of further service at any time, please let us know.

Sincerely,

Corporations Section
Business & Public Filings Division
(512) 463-5555

Enclosure



Office of the Secretary of State

CERTIFICATE OF FILING OF

SPIRE STORAGE WEST LLC
File Number: 803203875

The undersigned, as Secretary of State of Texas, hereby certifies that an Application for Registration for the above named Foreign Limited Liability Company (LLC) to transact business in this State has been received in this office and has been found to conform to the applicable provisions of law.

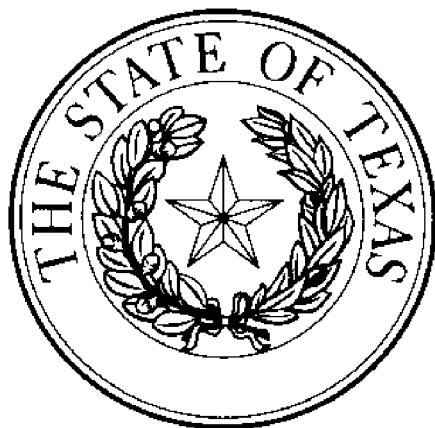
ACCORDINGLY, the undersigned, as Secretary of State, and by virtue of the authority vested in the secretary by law, hereby issues this certificate evidencing the authority of the entity to transact business in this State from and after the effective date shown below for the purpose or purposes set forth in the application under the name of

SPIRE STORAGE WEST LLC

The issuance of this certificate does not authorize the use of a name in this state in violation of the rights of another under the federal Trademark Act of 1946, the Texas trademark law, the Assumed Business or Professional Name Act, or the common law.

Dated: 01/08/2019

Effective: 01/08/2019



A handwritten signature in black ink, appearing to read "David Whitley".

David Whitley
Secretary of State

Form 304

Secretary of State
P.O. Box 13697
Austin, TX 78711-3697
FAX: 512/463-5709

Filing Fee: \$750



**Application for
Registration of
a Foreign Limited Liability
Company**

**Filed in the Office of the
Secretary of State of Texas
Filing #: 803203875 01/08/2019
Document #: 859826360002
Image Generated Electronically
for Web Filing**

1. The entity is a foreign limited liability company. The name of the entity is :

SPIRE STORAGE WEST LLC

2A. The name of the entity in its jurisdiction of formation does not contain the word "limited liability company" or "limited company" (or an abbreviation thereof). The name of the entity with the word or abbreviation which it elects to add for use in Texas is:

2B. The entity name is not available in Texas. The assumed name under which the entity will qualify and transact business in Texas is:

3. Its federal employer identification number is:

Federal employer identification number information is not available at this time.

4. It is organized under the laws of: **DELAWARE, USA**
and the date of its formation in that jurisdiction is: **9/2/2009**

5. As of the date of filing, the undersigned certifies that the foreign limited liability company currently exists as a valid limited liability company under the laws of the jurisdiction of its formation.

6. The purpose or purposes of the limited liability company that it proposes to pursue in the transaction of business in Texas are set forth below. The entity also certifies that it is authorized to pursue such stated purpose or purposes in the state or country under which it is organized.

Natural Gas Storage

7. The date on which the foreign entity intends to transact business in Texas, or the date on which the foreign entity first transacted business in Texas is: **01/08/2019**

8. The principal office address of the limited liability company is:

700 Market Street, Saint Louis, MO, USA 63101

9A. The initial registered agent is an organization by the name of:

Incorp Services, Inc.

9B. The initial registered agent is an individual resident of the state whose name is:

9C. The business address of the registered agent and the registered office address is:

815 Brazos St., Ste. 500 Austin TX 78701

Consent of Registered Agent

A. A copy of the consent of Registered Agent is attached.

OR

B. The consent of the registered agent is maintained by the entity.

10. The entity hereby appoints the Secretary of State of Texas as its agent for service of process under the circumstances set forth in section 5.251 of the Texas Business Organizations Code.

11. The name and address of each governing person is:

NAME OF GOVERNING PERSON (Enter the name of either an individual or an organization, but not both):

IF INDIVIDUAL

Danielle D. Cherney

OR

IF ORGANIZATION

ADDRESS OF GOVERNING PERSON :

700 Market Street Saint Louis MO, USA 63101

Supplemental Provisions / Information

[The attached addendum, if any, is incorporated herein by reference.]

Effectiveness of Filing

A. This document becomes effective when the document is filed by the secretary of state.

OR

B. This document becomes effective at a later date, which is not more than ninety (90) days from the date of its signing. The delayed effective date is:

Execution

The undersigned affirms that the person designated as registered agent has consented to the appointment. The undersigned signs this document subject to the penalties imposed by law for the submission of a materially false or fraudulent instrument and certifies under penalty of perjury that the undersigned is authorized under the provisions of law governing the entity to execute the filing instrument.

Date: **January 8, 2019**

Danielle D. Cherney

Signature and title of authorized person on behalf of the foreign entity

FILING OFFICE COPY



Ed Murray
Wyoming Secretary of State
 2020 Carey Avenue, Suite 700
 Cheyenne, WY 82002-0020
 Ph. 307.777.7311
 Fax 307.777.5339
 Email: Business@wyo.gov

WY Secretary of State
FILED: 05/30/2018 03:24 PM
Original ID: 2009-000574426
Amendment ID: 2018-002316867

**Foreign Limited Liability Company
 Application for Amended Certificate of Authority**

Pursuant to W.S. 17-16-1504 the undersigned limited liability company hereby applies for an Amended Certificate of Authority:

Current Information on File:

1. Name of the limited liability company:

Ryckman Creek Resources, LLC

2. Organized under the laws of:

Delaware
(State or country)

3. Period of duration:

Perpetual

(This is referring to the length of time the limited liability company intends to exist and not the length of time it has been in existence. The most common term used is "perpetual.")

Amended Information:

(Check all that apply and enter the changes in the appropriate fields.)

4. New Company Name:

Spire Storage West LLC

5. New State or Country of Organization:

6. New Period of Duration:

Signature: Ellen L. Theroff
(Shall be executed by a person authorized by the company.)

Date: 05/15/2018
(mm/dd/yyyy)

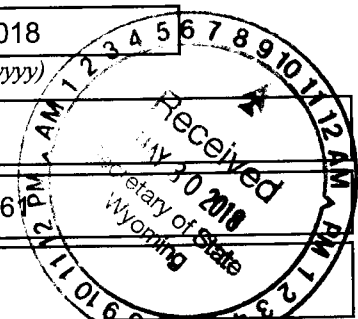
Print Name: Ellen L. Theroff

Contact Person: Ellen L. Theroff

Title: Member

Daytime Phone Number: 314-342-3361

Email: documents@incorp.com



*(Email provided will receive annual report reminders and filing evidence)
 May list multiple email addresses

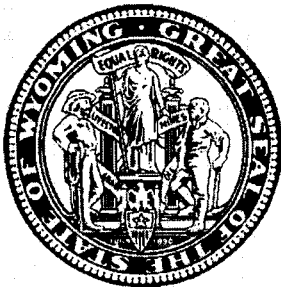
STATE OF WYOMING
Office of the Secretary of State

I, EDWARD A. BUCHANAN, Secretary of State of the State of Wyoming, do hereby certify that the filing requirements for the issuance of this certificate have been fulfilled.

CERTIFICATE OF NAME CHANGE

Current Name: Spire Storage West LLC
Old Name: Ryckman Creek Resources, LLC

I have affixed hereto the Great Seal of the State of Wyoming and duly executed this official certificate at Cheyenne, Wyoming on this **30th** day of **May, 2018**



Filed Date: 05/30/2018

Edward A. Buchanan

Secretary of State

By: Cristina Castillo



Spire Storage West LLC
Clear Creek Expansion Project
Docket No. CP21-____-000
Exhibit C

**SPIRE STORAGE WEST LLC
CLEAR CREEK EXPANSION PROJECT**

EXHIBIT C
COMPANY OFFICIALS

The following lists the names and titles of the officers and directors of Spire Storage.

Spire Storage West LLC
Company Officials

| <u>Name</u> | <u>Title</u> | <u>Address</u> |
|--------------------|---|---|
| Steven L. Lindsey | Chief Executive Officer | 700 Market Street, St. Louis, MO 63101 |
| Scott R. Smith | President | 3773 Richmond Avenue, Suite 300, Houston, TX 77046 |
| D. Scott Sabbert | Chief Financial Officer | 700 Market Street, St. Louis, MO 63101 |
| James E. Haider | Vice President | 700 Market Street, St. Louis, MO 63101 |
| Sean P. Jamieson | General Counsel and Assistant Corporate Secretary | 3773 Richmond Avenue, Suite 300, Houston, TX 77046 |
| Adam W. Woodard | Treasurer | 700 Market Street, St. Louis, MO 63101 |
| Ellen L. Theroff | Corporate Secretary | 700 Market Street, St. Louis, MO 63101 |
| Courtney M. Vomund | Assistant Corporate Secretary | 700 Market Street, St. Louis, MO 63101 |



Spire Storage West LLC
Clear Creek Expansion Project
Docket No. CP21-____-000
Exhibit D

**SPIRE STORAGE WEST LLC
CLEAR CREEK EXPANSION PROJECT**

EXHIBIT D
SUBSIDIARIES AND AFFILIATIONS

Spire Storage West LLC

Subsidiaries and Affiliates

Spire Storage West LLC (“Spire Storage”) is organized as a Delaware limited liability company and has no subsidiaries.

Belle Butte LLC, a Missouri limited liability company, owns 100 percent of the membership interests of Spire Storage. Belle Butte LLC was organized December 8, 2017 for the purpose of holding interests in the Belle Butte Storage Field and the Clear Creek Storage Field in Uinta County, Wyoming.

Spire Midstream LLC, a Missouri limited liability company, owns 100 percent of the membership interests in Belle Butte LLC. Spire Midstream LLC was originally organized as Spire Pipelines LLC May 23, 2016 and changed its name effective December 13, 2016.

Spire Resources LLC owns 100 percent of the membership interests of Spire Midstream LLC. Spire Resources LLC, a Missouri limited liability company, was organized May 26, 2016 for the purpose of owning interests in midstream and upstream subsidiaries.

Spire Inc. owns 100 percent of the membership interests in Spire Resources LLC. Spire Inc., the ultimate parent of the Spire corporate family, is a publicly traded holding company (NYSE: SR) based in St. Louis, Missouri.

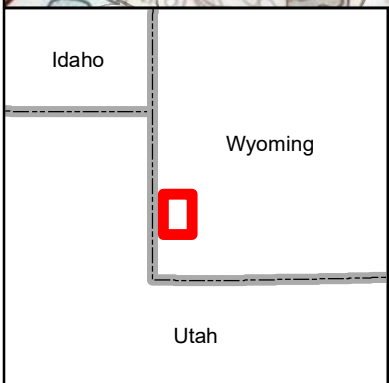
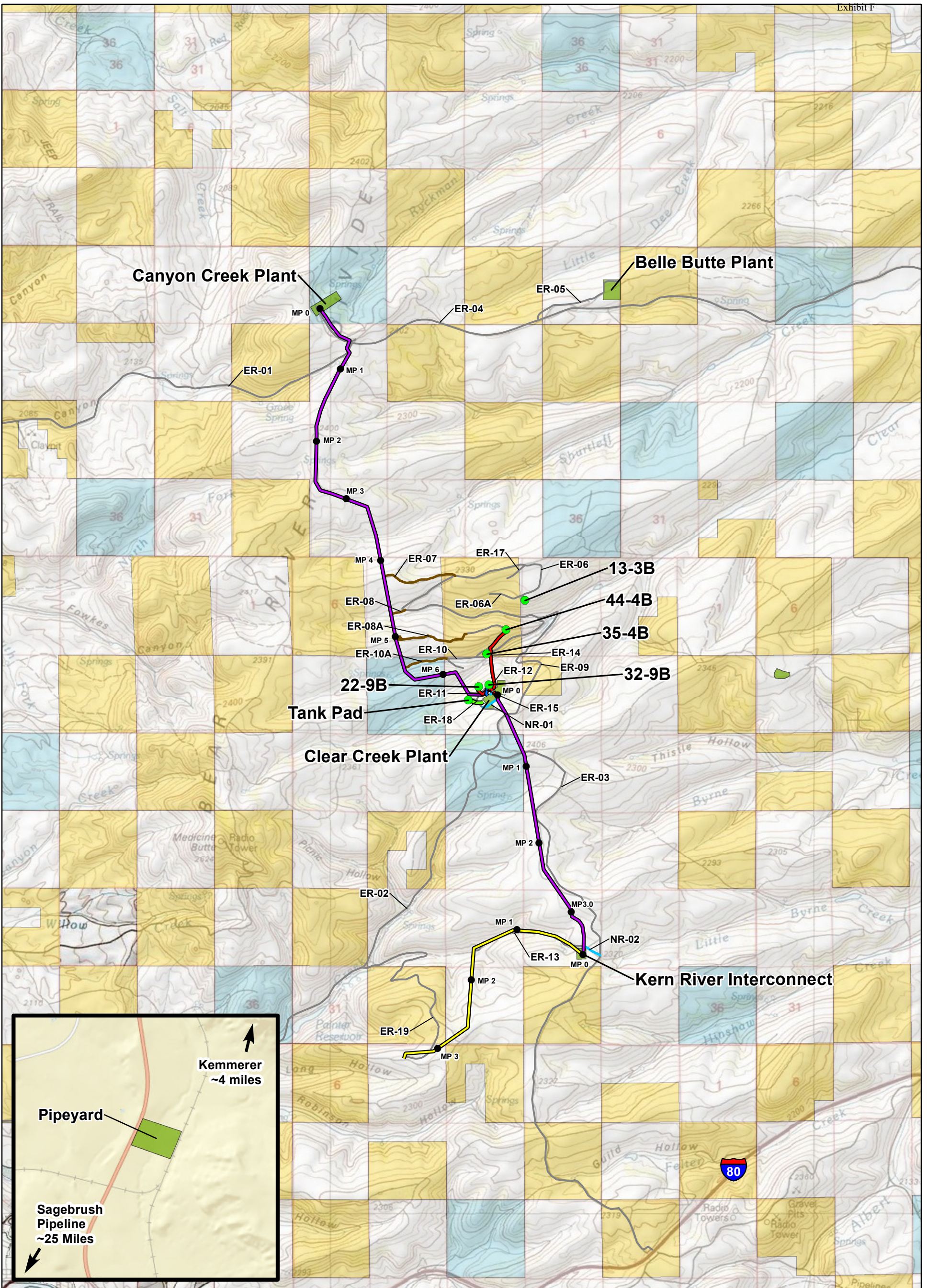


Spire Storage West LLC
Clear Creek Expansion Project
Docket No. CP21-____-000
Exhibit F

**SPIRE STORAGE WEST LLC
CLEAR CREEK EXPANSION PROJECT**

EXHIBIT F
LOCATION OF FACILITIES

Z:\Denver_GIS\Projects\0631356_ClearCreek_Expansion\Project\Figures\FERC_Maps\EX_F_LocationOfFacilities.mxd



| | |
|---|-------------------------------|
| ● Well Pad | Existing Access Road |
| Facility | Improved Existing Access Road |
| Sagebrush Pipeline | New Access Road |
| Gathering Header | Land Ownership |
| Powerline | BLM |
| Water Disposal Line | Private |
| Tank Pad Flowline | State |

CLEAR CREEK EXPANSION PROJECT

Exhibit F
Location of Facilities

0 1,950 3,900 7,800
Feet



Spire Storage West LLC
Clear Creek Expansion Project
Docket No. CP21-____-000
Exhibit G/G-I

**SPIRE STORAGE WEST LLC
CLEAR CREEK EXPANSION PROJECT**

EXHIBITS G/G-I
FLOW DIAGRAMS



**Critical Energy Infrastructure Information Redacted and
Provided in Volume III**



Spire Storage West LLC
Clear Creek Expansion Project
Docket No. CP21-____-000
Exhibit G-II

**SPIRE STORAGE WEST LLC
CLEAR CREEK EXPANSION PROJECT**

EXHIBIT G-II
FLOW DIAGRAM DATA



**Critical Energy Infrastructure Information Redacted and
Provided in Volume III**



Spire Storage West LLC
Clear Creek Expansion Project
Docket No. CP21-____-000
Exhibit I

**SPIRE STORAGE WEST LLC
CLEAR CREEK EXPANSION PROJECT**

EXHIBIT I
MARKET DATA

1 UNITED STATES OF AMERICA
2 BEFORE THE
3 FEDERAL ENERGY REGULATORY COMMISSION

4 Spire Storage West LLC) Docket No. CP21-____-000
5
6
7

8 PREPARED TESTIMONY OF
9 TOBY BISHOP
10

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

12 A. My name is Toby Bishop, and I am a Vice President of Concentric Energy Advisors, Inc.
13 (“Concentric”). My business address is 293 Boston Post Road West, Suite 500,
14 Marlborough, MA 01752.
15

16 **Q. Please describe your professional background and experience.**

17 A. I have over 25 years of experience consulting in the North American energy industry
18 regarding natural gas and electric matters. My natural gas pipeline experience includes
19 numerous engagements assisting clients in the United States and Canada with a wide range
20 of issues, including policy and strategic issues, rate and financial matters, market power,
21 asset valuation, litigation/arbitration support and damages, market assessments, and project
22 development matters. My experience has included a number of rate proceedings in both
23 the US and Canada on behalf of individual shippers, large shipper groups, and pipelines. I
24 have also assisted various clients throughout the United States and Canada with market-
25 related matters and have prepared numerous assessments of market dynamics that have
26 been filed with the Federal Energy Regulatory Commission (“Commission” or “FERC”),
27 used publicly for development initiatives, and used internally by clients for investment
28 decisions.
29

30 **Q. Have you previously assisted clients in the evaluation of issues related to market
31 power, and specifically storage-related market power issues?**

1 A. Yes. I have assisted over twenty storage owners and developers, as well as pipelines and
2 electric and gas utilities, in both the United States and Canada, with market power-related
3 issues, including corporate mergers and market-based rate evaluations.
4

5 **Q. Have you previously submitted prepared testimony before the Commission or other**
6 **regulatory agencies?**

7 A. Yes. I have provided expert testimony on a number of occasions before federal, state and
8 provincial regulatory agencies in the United States and Canada, including before the
9 Commission. Regarding market power issues specifically, I have submitted testimony on
10 behalf of numerous storage clients concerning requests for market-based rates in both the
11 United States and Canada. In addition, I have previously submitted testimony on various
12 policy, rate and tariff-related matters concerning natural gas and crude oil pipelines before
13 the Commission and the National Energy Board and Canada Energy Regulator in Canada.
14 A copy of my résumé and a listing of the testimony I have sponsored is included as
15 Appendix A.
16

17 **I. INTRODUCTION**

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

19 A. I am providing this testimony on behalf of Spire Storage West LLC (“Spire Storage West”),
20 which is a subsidiary of Spire Inc. (“Spire”). In late 2017, Spire acquired out of bankruptcy
21 an indirect controlling interest in Ryckman Creek Resources, LLC, which it later renamed
22 Spire Storage West. Spire Storage West currently owns the storage facility known as Belle
23 Butte (formerly known as Ryckman Creek) located in southwestern Wyoming. In May
24 2018, Spire indirectly acquired Clear Creek Storage Company, L.L.C., owner of the nearby
25 Clear Creek storage facility. The Belle Butte and Clear Creek facilities (collectively, the
26 “Facilities”) are operated in an integrated manner under the existing Spire Storage West
27 tariff. In this proceeding, Spire Storage West is proposing to expand the working gas
28 capacity of the Clear Creek facility from 4 Bcf to 20 Bcf and expand the deliverability of
29 the facility from 50 MMcf/d to 500 MMcf/d.
30

1 **Q. Has Spire Storage West or any of its subsidiaries or affiliates previously received**
2 **approval from the Commission to provide services at market-based rates?**

3 A. Yes. Under prior ownership, the Commission previously approved in Docket Nos. CP11-
4 24-000 market-based rates for firm and interruptible storage service and interruptible
5 wheeling service related to the Belle Butte storage facility.¹ In addition, the Commission
6 most recently approved market-based storage and interruptible wheeling rates for the
7 combined Belle Butte and Clear Creek facilities in Docket No. CP18-520-000 and CP18-
8 521-000.²

9
10 **Q. What is the purpose of your testimony?**

11 A. Spire Storage West is requesting that the Commission reaffirm its market-based rate
12 authorization for the storage and wheeling services to be provided by Spire Storage West
13 after its expansion of the Clear Creek storage facility. As such, the purpose of my
14 testimony is to evaluate whether Spire Storage West, and its ultimate parent, Spire, will
15 likely be able to exercise market power in the provision of firm and interruptible storage
16 service, and interruptible wheeling services across its storage header facilities once the
17 Clear Creek storage facility is expanded. I have been asked by Spire Storage West to
18 conduct a market power analysis consistent with the Commission's requirements for
19 market-based rate applications for firm and interruptible storage and wheeling services.

20
21 **Q. Please provide a description of Spire Storage West's storage and related pipeline**
22 **facilities.**

23 A. Spire Storage West is the owner and operator of the Belle Butte and Clear Creek storage
24 facilities located in Uinta County, Wyoming. The Belle Butte facility has a working gas
25 capacity of 35 Bcf and a maximum daily delivery capability of 480 MMcf/d. The Clear
26 Creek storage facility has a working gas capacity of 4 Bcf and a maximum daily delivery
27 capability of 50 MMcf/d. As noted, Spire Storage West is proposing to increase the
28 working gas capacity of Clear Creek to 20 Bcf and the deliverability to 500 MMcf/d. The

¹ *Ryckman Creek Resources, LLC and Canyon Creek Compression Company*, 136 FERC ¶ 61,061 (2011).

² *Spire Storage West, LLC and Clear Creek Storage Company L.L.C.*, 166 FERC ¶ 62,038 (2019).

1 Facilities are interconnected to one another via a 6-inch and 8-inch diameter pipeline, and
2 as such, the Facilities are currently interconnected with five interstate pipelines: Questar
3 Pipeline Company (“Questar”); Questar Overthrust Pipeline (“Overthrust”); Kern River
4 Gas Transmission Company (“Kern River”); Northwest Pipeline (“Northwest”); and Ruby
5 Pipeline (“Ruby”). Spire Storage West is also proposing to increase the interconnection
6 capability with Kern River through a new interconnection via the proposed Sagebrush
7 Pipeline. The capabilities of these existing and proposed interconnections are shown in
8 Figure 1:

9
10 **Figure 1: Receipt and Delivery Capability of Spire Storage West’s Interconnections**

| | Receipt Capability (MMcf/d) | Delivery Capability (MMcf/d) |
|-----------------------------|--|---|
| Kern River Gas Transmission | 711 | 555 |
| Northwest Pipeline | 75 | 75 |
| Overthrust Pipeline | 424 | 424 |
| Questar Pipeline | 210 | 210 |
| Ruby Pipeline | 400 | 400 |

11
12
13 The storage header pipeline facilities are a short-haul, intermediary pipeline located in a
14 region with numerous other, much larger interstate pipelines.

15
16 **Q. In addition to the Facilities, does Spire or any of its subsidiaries or affiliates own, lease**
17 **and/or operate any other natural gas storage or transmission facilities in the western**
18 **United States?**

19 A. No. Spire owns a number of local distribution companies in Missouri, Alabama and
20 Mississippi, and through these regulated utility subsidiaries, also owns other natural gas
21 and propane storage facilities; however, these facilities are not utilized to provide interstate
22 service, nor are they in the same geographic market as the Facilities. In addition, Spire is
23 the owner of the STL Pipeline, which is a 65-mile pipeline that connects the Spire Missouri
24 utility distribution system with the Rockies Express Pipeline in Scott County, Illinois.

1 Again, these pipeline facilities are not in the same geographic market nor do they
2 interconnect with the Facilities.

3
4 **Q. Is the analysis that you have prepared consistent with the Commission’s traditional
5 market power framework for natural gas storage facilities?**

6 A. Yes. The analysis that I have performed is done in accordance with the traditional market
7 power analytical framework used to evaluate market-based rate applications of natural gas
8 companies as set forth in the Commission’s 1996 policy statement titled *Alternatives to
9 Traditional Cost of Service Ratemaking for Natural Gas Pipelines and Regulation of
10 Negotiated Transportation Services of Natural Gas Pipelines* (“Policy Statement”),³ and
11 taking into consideration subsequent Commission orders regarding market-based firm and
12 interruptible storage and wheeling rates, including the Commission’s Order Nos. 678 and
13 678-A.⁴

14
15 In its Policy Statement, the Commission stated that, “where a natural gas company can
16 establish that it lacks significant market power, market-based rates are a viable option for
17 achieving the flexibility and added efficiency required by the current market-place.”⁵
18 Pursuant to FERC precedent, an applicant for market-based rates must demonstrate that
19 neither the applicant nor any of its affiliates will be able to exercise market power in any
20 relevant market. A lack of market power can be demonstrated by either showing that the
21 applicant has a market share in each relevant market that is below the safe harbor levels
22 typically considered by the Commission as an indication of lack of market power, or
23 through market power mitigation measures that alleviate any market power concerns.

24
25 The Policy Statement sets forth three steps that must be evaluated by applicants for market-
26 based rates: (1) defining the relevant geographic and product markets; (2) measuring a

³ *Alternatives to Traditional Cost of Service Ratemaking for Natural Gas Pipelines and Regulation of Negotiated Transportation Services of Natural Gas Pipelines*, 74 FERC ¶ 61,076 (1996).

⁴ *Rate Regulation of Certain Natural Gas Storage Facilities* (“Order No. 678”), FERC Stats. & Regs. ¶ 31,220 (2006) , *order on clarification and reh’g* (“Order No. 678-A”), 117 FERC ¶ 61,190 (2006).

⁵ *Policy Statement*, at 61,227.

1 firm's market share and market concentration in the relevant market; and (3) evaluating
2 other factors relevant to the applicant's ability to exercise market power.

3
4 The Commission has traditionally evaluated two ways in which an applicant could exercise
5 market power – alone or acting in conjunction with other sellers in the market. Thus, the
6 Commission has evaluated both an applicant's market share in the relevant market and the
7 overall concentration of the market to determine whether market-based rate authority is
8 appropriate. Market share provides an indication of an applicant's ability individually to
9 exercise market power, while market concentration provides an indication of the ability of
10 an applicant to work in conjunction with other sellers in the market to exercise market
11 power.

12
13 **Q. Is the analysis that you have conducted herein the same as the analysis that you**
14 **previously conducted on behalf of Spire Storage West?**

15 A. Yes. With the exception of updating the analysis for the most recent data available, the
16 overall analysis that I have conducted herein is the same analysis previously conducted for
17 Spire Storage West and which was approved by the Commission.⁶

18
19 **Q. Please summarize the appendices to your testimony.**

20 A. I am sponsoring the following additional appendices:

- 21 • Appendix A Résumé and testimony listing
- 22 • Appendix B Map of storage facilities in relevant geographic market
- 23 • Appendix C Calculation of Spire Storage West's market share and the
24 overall concentration in the relevant geographic market for
25 working gas capacity
- 26 • Appendix D Calculation of Spire Storage West's market share and the
27 overall concentration in the relevant geographic market for
28 maximum withdrawal
- 29 • Appendix E Analysis of local production as substitute for storage service
- 30 • Appendix F "Bingo Card" analysis

⁶ *Spire Storage West, LLC and Clear Creek Storage Company L.L.C.*, 166 FERC ¶ 62,038 (2019).

- 1 • Various storage providers have previously entered the market and/or
2 announced new storage projects, indicating a relative ease of entry into the
3 market when market conditions warrant;
- 4 • Spire Storage West is dependent upon non-affiliated interstate pipelines to
5 transport its customers' natural gas from the proposed storage facility to the
6 customers' markets, and many of these same pipelines own and operate
7 their own storage facilities;
- 8 • There are numerous alternatives to storage available to customers, including
9 an active capacity release market on the interstate pipelines, pipeline park
10 and loan services, and seasonal/swing services provided by marketers;
- 11 • A significant amount of the storage in the relevant geographic market is
12 provided at cost-based rates regulated by the Commission; and
- 13 • With the Clear Creek expansion, Spire Storage West will remain a very
14 small participant in the relevant market and will continue to be comparable
15 to other storage providers in the same geographic market and elsewhere
16 throughout the U.S. that previously have been granted market-based rate
17 authority by the Commission.

18 For all of the reasons noted above, it is my conclusion that Spire Storage West will continue
19 to be unable to exercise market power if granted the authority to continue to charge market-
20 based rates for its firm and interruptible storage services.

21
22 Furthermore, based on my assessment of Spire Storage West's potential to exercise market
23 power if granted authority by the Commission to continue to provide interruptible wheeling
24 services at market-based rates, my conclusions are as follows:

- 25 • The pipelines that are directly and indirectly interconnected to Spire Storage West
26 are also interconnected with each other in numerous other locations in the relevant
27 geographic market. This indicates that shippers can avoid the pipeline
28 interconnections provided by Spire Storage West and rely entirely on other pipeline
29 interconnections currently available in the market to wheel natural gas if Spire
30 Storage West were to attempt to raise prices and exercise market power.
- 31 • Spire Storage West has a market share of only 6.0% and 5.5% for receipt capacity
32 and delivery capacity, respectively, for pipeline interconnections in the relevant
33 geographic market.
- 34 • There are 152 receipt and delivery interconnections in the relevant
35 geographic market area for the pipelines directly and indirectly
36 interconnected to Spire Storage West that provide alternative routes for
37 natural gas to be wheeled in lieu of using Spire Storage West's pipeline
38 facilities.

- 1 • These alternative interconnections provide over 15 times the amount of
2 receipt and delivery capability that Spire Storage West has to provide
3 wheeling service.
- 4 • The market for both receipt and delivery point capacity is considered
5 concentrated. However, the degree of concentration is a function of two
6 corporate entities that each own five different pipelines in the relevant
7 geographic market. Regardless, the receipt and delivery capacity in the
8 relevant geographic market is nearly entirely controlled by interstate
9 pipelines that provide open-access firm transportation service pursuant to
10 cost-based rates approved by the Commission. As such, the market
11 concentration has previously been found by the Commission to not be a
12 concern in this geographic market.⁸
- 13 • The wheeling service provided by Spire Storage West can very reasonably be
14 provided by other market participants through their existing facilities, or through
15 the development of additional facilities if Spire Storage West were to attempt to
16 exercise market power.
- 17 • Lastly, Spire Storage West will remain a small participant in the market and will
18 continue to be comparable to other storage providers in the same geographic market
19 with pipeline header systems that have been granted market-based rate authority by
20 the Commission for firm and interruptible wheeling services,⁹ and the findings are
21 consistent with the Commission’s prior conclusions regarding Ryckman Creek’s
22 interruptible wheeling service.¹⁰

23 For all of the reasons noted above, it is my conclusion that Spire Storage West will continue
24 to be unable to exercise market power if granted market-based rate authority for its
25 interruptible wheeling service.

26

27 **III. MARKET POWER ANALYSIS**

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

29 A. I have defined the relevant product market as firm and interruptible storage service, and
30 separately, as interruptible wheeling (or transportation) service.¹¹ The interruptible

⁸ *Magnum Gas Storage, LLC*, 157 FERC ¶ 61,114 (2016); *Magnum Gas Storage, LLC and Magnum Solutions, LLC*, 134 FERC ¶ 61,197 (2011).

⁹ *See, e.g., Magnum Gas Storage, LLC*, 157 FERC ¶ 61,114 (2016); *East Cheyenne Gas Storage, LLC*, 132 FERC ¶ 61,097 (2010).

¹⁰ *Ryckman Creek Resources, LLC and Canyon Creek Compression Company*, 136 FERC ¶ 61,061 (2011).

¹¹ As discussed, Belle Butte, under prior ownership, previously received market-based rate authority from the Commission for the provision of firm and interruptible storage service, as well as interruptible wheeling service.

1 wheeling service that Spire Storage West offers is a transportation service, and the
2 Commission has historically recognized wheeling services as a separate product distinct
3 from firm and interruptible storage services. Defining the relevant product market in this
4 manner is consistent with the definition the Commission has previously used in evaluating
5 Spire Storage West’s prior request for market-based rates,¹² as well as for numerous natural
6 gas storage projects that have received market-based rate authority, both in the relevant
7 market area and in other regions of the United States.¹³ The firm and interruptible storage
8 services and interruptible wheeling service offered by Spire Storage West after the
9 expansion of Clear Creek will be the same as the firm and interruptible storage and
10 interruptible wheeling service that are currently provided by Spire Storage West. These
11 services to be offered by Spire Storage West pursuant to market-based rate authority from
12 the Commission will be standard storage and transportation services that are provided by
13 numerous interstate and intrastate natural gas storage providers and pipelines throughout
14 the United States.

15
16 Specifically with regard to the firm and interruptible storage services, I have evaluated the
17 potential for Spire Storage West to exercise market power considering a product market
18 consisting of other storage facilities, as well as local production, which the Commission
19 has recognized can be found to be a competitive alternative to firm and interruptible storage.
20 Appendices C and D present the market share and market concentration analysis related to
21 Spire Storage West’s firm and interruptible storage services.

22
23 **Q. Did you conduct an analysis to determine whether local production represents a**
24 **reasonable substitute to storage in this instance?**

25 A. Yes. In Order Nos. 678, the Commission stated that it “finds it is appropriate to adopt a
26 more expansive definition of the relevant product market for storage to explicitly include
27 close substitutes for gas storage services, including pipeline capacity, and local

¹² *Spire Storage West, LLC and Clear Creek Storage Company L.L.C.*, 166 FERC ¶ 62,038 (2019).

¹³ *See, e.g., Arlington Storage Company, LLC*, 163 FERC ¶ 61,077 (2018); *Golden Triangle Storage, Inc.*, 152 FERC ¶ 61,158 (2015).

1 production/LNG supply.”¹⁴ In order for these alternatives to be relevant to a market power
2 analysis, however, they must be shown to be competitive with natural gas storage. As
3 stated by the Commission, “for a non-storage product to be a good alternative [to storage]
4 it must be available soon enough, have a price low enough and have a quality high enough
5 to permit customers to substitute the alternative for the applicant’s services.”¹⁵ As
6 discussed in Appendix E, I evaluated local production in the relevant market as alternatives
7 to storage, and have concluded that local production satisfies the Commission’s criteria of
8 availability, price, and quality. Reflecting local production as a competitive alternative to
9 natural gas storage is consistent with the approach previously approved by the Commission
10 in Spire Storage West’s prior request for market-based rates.¹⁶

11
12 **Q. How have you defined the relevant geographic market for purposes of the analysis?**

13 A. I have defined the relevant geographic market in the same manner as utilized in Spire
14 Storage West’s prior request for market-based rates that was previously approved by the
15 Commission. Specifically, I have defined the geographic market as the storage facilities
16 that are accessible via the pipelines directly and indirectly interconnected to the Spire
17 Storage West facilities. As noted, the Facilities are interconnected with five interstate
18 natural gas pipelines. Therefore, based on the methodology previously utilized for defining
19 the relevant geographic market, I have defined the relevant geographic market as the
20 storage facilities that are interconnected to pipelines that are directly and indirectly
21 interconnected to the Facilities. This relevant geographic market includes interstate storage
22 facilities accessible to these pipelines in Wyoming, Colorado, Utah, Washington, Oregon,
23 Kansas and northern Oklahoma (defined herein as the “Rockies/Plains” geographic market
24 area). Defining the geographic market in this manner is also consistent with the relevant
25 geographic market that the Commission previously has adopted in evaluating numerous

¹⁴ Order No. 678, at P. 25.

¹⁵ *Id.*, at P. 27.

¹⁶ *Spire Storage West, LLC and Clear Creek Storage Company L.L.C.*, 166 FERC ¶ 62,038 (2019).

1 natural gas storage projects that have received market-based rate authority, including
2 storage providers in close proximity to Spire Storage West.¹⁷

3
4 **STORAGE SERVICES ANALYSIS**

5 **Q. What data did you rely upon for purposes of evaluating Spire Storage West’s market**
6 **share and the market concentration in the relevant geographic market?**

7 A. For purposes of evaluating firm and interruptible storage services, I relied on the natural
8 gas storage information presented by the Energy Information Administration (“EIA”) in its
9 most recent Natural Gas Annual Respondent Query System database. This database
10 reflects various statistics for active and inactive storage facilities in the U.S., including the
11 name and type of the of the field, its owner, its base gas capacity, working gas capacity and
12 maximum daily delivery capability. Since certain of the storage facilities in the relevant
13 geographic market are jointly owned, and the EIA database does not reflect these multiple
14 ownership positions, I have also supplemented this information as applicable with
15 information from various parties’ filings with the Commission, Commission orders, trade
16 press research, information on company websites and electronic bulletin boards, and other
17 publicly-available materials. Appendix B is a map of the relevant geographic market
18 showing that there are numerous existing storage facilities in the region.

19
20 **Q. How have you treated jointly-owned storage facilities in your analysis?**

21 A. There are three jointly-owned storage facilities in the relevant geographic market.
22 According to Commission precedent, “a voting interest of ten percent or more creates a
23 rebuttable presumption of control.”¹⁸ For these three jointly-owned storage facilities,
24 while the respective ownership interests are known, the terms of the ownership are not
25 publicly available and thus it is not known whether each of the owners have effective
26 control over the proportion of the capability of the storage field consistent with their
27 ownership interest or whether the operator of the facility has effective control. For

¹⁷ See, e.g., *Magnum Gas Storage, LLC*, 157 FERC ¶ 61,114 (2016); *Leader One Energy, LLC*, 136 FERC ¶ 61,113 (2011); *East Cheyenne Gas Storage, LLC*, 132 FERC ¶ 61,097 (2010); *Unocal Windy Hill Gas Storage, LLC*, 115 FERC ¶ 61,218 (2006).

¹⁸ ANRS Order on Rehearing, P. 32, citing *WPS-ESI Gas Storage, LLC*, 108 FERC ¶ 61,061 (2004).

1 purposes of this analysis, I have assumed that each owner has control over their respective
2 share of the storage facility, meaning each owner controls the working gas capacity and
3 deliverability associated with their respective ownership percentage of the facility.
4

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

7 A. For a number of reasons, I would characterize the approach reflected in the market power
8 analysis for storage services as conservative because the analysis narrowly defines the
9 competitive alternatives to Spire Storage West's storage facilities, and thus overstates its
10 market share and the market concentration in the market. For example:

- 11 • In the Order No. 678, the Commission acknowledged that the product market
12 for storage services may be expanded to include alternatives to storage,
13 including pipeline capacity, local gas production and LNG supplies, since these
14 services are close substitutes to storage service.¹⁹ While local production is
15 included in Appendices C and D, not all production in the relevant geographic
16 market was reflected, but rather only the production in Wyoming, where Spire
17 Storage West is located, and in the neighboring states of Colorado and Utah.
18 Local production in other states accessible to the pipelines directly and
19 indirectly connected to Spire Storage West have not been reflected.
- 20 • The analyses presented in Appendices C and D do not consider storage
21 substitutes other than natural gas production, such as pipeline capacity held by
22 customers with the potential to release such capacity during peak winter periods
23 (*i.e.*, marketers and producers).
- 24 • The calculations of market share and market concentration presented in
25 Appendices C and D only consider those storage facilities that are not
26 designated specifically for the use of the corporate parent. There are additional
27 storage facilities in the relevant geographic market that are *not* included in the
28 analysis, leading to a relatively greater market share for Spire Storage West.
- 29 • The relevant geographic market has been conservatively defined, as there is
30 significant additional storage in California that provides competitive
31 alternatives to Spire Storage West but that has not been considered in the
32 calculations of market share and market concentration presented on Appendices
33 C and D. The significant amount of storage located in California is indirectly
34 connected to Spire Storage West via both Kern River and Ruby. The storage in
35 California is owned both by utilities and independent third-parties that is offered
36 in the market and can compete with Spire Storage West. Again, not including

¹⁹ See, Order No. 678 at P 6.

1 these additional storage facilities in the relevant geographic market otherwise
2 leads to a relatively greater market share for Spire Storage West.

3 Therefore, if all storage and local production were considered in the relevant market, then
4 Spire Storage West’s market share and market concentration would be even lower than the
5 values reflected on Appendices C and D. Considering that all of the adjustments made to
6 the market power analysis for firm and interruptible storage services are conservative, and
7 potentially overstate Spire Storage West’s ability to exert market power, my analysis
8 comports with the Commission’s previously stated policy that, if an applicant can
9 demonstrate a lack of market power in a narrowly-defined market, it is presumed that the
10 applicant will be unable to exert market power in a broader market.²⁰

11
12 **Q. What are the results of the market power analysis for Spire Storage West’s market**
13 **share of firm and interruptible storage services?**

14 A. The analysis demonstrates that Spire Storage West will be unable to exercise market power
15 in the relevant geographic market for firm and interruptible storage services. As shown in
16 Appendices C and D, there are 26 separate storage facilities or ownership positions in
17 storage facilities in the relevant geographic market that are unaffiliated with and compete
18 with Spire Storage West. Specifically, there is over 257 Bcf of storage working gas
19 capacity and over 6.4 Bcf/d of maximum daily deliverability in this region. In addition,
20 because Spire Storage West is located in the prolific Rocky Mountains natural gas
21 producing region, the local production with which Spire Storage West competes is
22 substantial. As shown on Appendices C and D, based on the conservative approach to
23 evaluating Spire Storage West’s ability to exert market power for storage services, Spire
24 Storage West’s market share is just 3.0% of the total working gas capacity, and 5.8% of
25 the peak deliverability in the relevant market.

26

²⁰ See, e.g., *Worsham-Steed Gas Storage, L.P.*, 119 FERC ¶ 61,128 at P 10 n.8 (2007) (citing Order No. 678 at P 38); Order No. 678 at P 38 (“If an applicant has demonstrated a lack of market power under the traditional definition of product market, it follows that the applicant would qualify for market-based rates using an expanded definition of product market that includes additional substitutes.”); *KN Interstate Gas Transmission Company*, 76 FERC ¶ 61,134 (1996) (“If the applicant cannot exercise market power in a narrowly-defined market then the Commission can reasonably assume that the applicant cannot exercise market power in a more widely-defined market.”)

1 **Q. Has the Commission identified a specific market share percentage below which it**
2 **would indicate a lack of market power?**

3 A. No. The Commission has not identified in the Policy Statement or elsewhere a market
4 share percentage threshold below which it would find a lack of market power. However,
5 the resulting market shares in Appendices C and D are below Spire Storage West’s market
6 shares when the Commission originally approved market-based firm and interruptible
7 storage rates for Belle Butte.²¹ In addition, Spire Storage West’s market shares are also
8 consistent with the Commission’s previous findings for storage applicants in the same
9 geographic market region,²² as well as throughout the United States,²³ highlighting that
10 these low market shares of working gas and maximum deliverability are indicative that
11 Spire Storage West will continue to be unable to exercise market power. In addition, while
12 Spire Storage West’s market share implies that it lacks market power, its location within a
13 large production area is also a significant factor that impedes Spire Storage West’s ability
14 to exercise market power. As the Commission has stated, “[i]n general, market power in a
15 production area is less of a concern due to the numerous alternative storage facilities
16 operating in competition with one another.”²⁴ The Rocky Mountains region is one of the
17 larger natural gas producing regions in the United States, and is interconnected to other
18 producing regions via interstate pipelines that are also directly and indirectly
19 interconnected to Spire Storage West. Therefore, it is my opinion that with the expansion

²¹ *Ryckman Creek Resources, LLC and Canyon Creek Compression Company*, 136 FERC ¶ 61,061 (2011) (applicant had a 5.3% market share for storage capacity and a 6.8% market share for maximum deliverability).

²² *See, e.g., Magnum Gas Storage, LLC*, 157 FERC ¶ 61,114 (2016); *Magnum Gas Storage, LLC and Magnum Solutions, LLC*, 134 FERC ¶ 61,197 (2011) (approving market-based rates for market shares of 1.7% and 2.7% of working gas capacity and deliverability, respectively, in the defined Rockies/Plains market); *Leader One Energy, LLC*, 136 FERC ¶ 61,113 (2011) (approving market-based rates for market shares of 3.4% and 4.3% of working gas capacity and deliverability, respectively, in the defined Rockies/Mid-Continent market); *East Cheyenne Gas Storage, LLC*, 132 FERC ¶ 61,097 (2010) (approving market-based rates for market shares of 6.9% and 6.1% of working gas capacity and deliverability, respectively, in the defined Rockies/Plains market); *Unocal Windy Hill Gas Storage, LLC*, 115 FERC ¶ 61,218 (2006) (approving market-based rates for market shares of 1.9% and 6.3% of working gas capacity and deliverability, respectively).

²³ *See, e.g., ONEOK Gas Storage, L.L.C.*, 90 FERC ¶ 61,283 (2000) (market shares of 13.5% and 21.8% of working gas capacity and deliverability, respectively); *Petal Gas Storage, L.L.C.*, 97 FERC ¶ 61,097 (2001) (market shares of 15.8% and 17.6% of working gas capacity and deliverability, respectively).

²⁴ *Unocal Windy Hill Gas Storage, LLC*, 115 FERC ¶ 61,218 at P 10 (2006).

1 of Clear Creek, Spire Storage West will continue to be unable to exercise market power for
2 storage services.

3
4 **Q. What are the results of the market power analysis regarding market concentration**
5 **for firm and interruptible storage services?**

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

15
16 As shown on Appendices C and D, the market concentration for both working gas capacity
17 and peak day deliverability would be considered unconcentrated given the HHI levels of
18 770 and 576, respectively. This indicates that Spire Storage West will continue to be
19 unable to work in conjunction with other sellers in the market to exercise market power for
20 storage services. In addition, even though the market is unconcentrated, the Commission
21 has also found in numerous cases that the degree of market concentration was not a factor
22 in situations where the majority of the storage services in the market are regulated and are
23 constrained to charge cost-based rates, thus alleviating the potential to collude with others
24 in the market to exercise market power.²⁵ This is the case with the vast majority of the
25 storage in the relevant geographic market.

26

²⁵ See, e.g., *Honeoye Storage Corp.*, 91 FERC ¶ 62,165 (2000); *Central New York Oil and Gas Co., LLC*, 94 FERC ¶ 61,194 (2001); *Seneca Lake Storage, Inc.*, 98 FERC ¶ 61,163 (2002); *Wyckoff Gas Storage Company, LLC*, 105 FERC ¶ 61,027 (2003); *Central New York Oil And Gas Co., LLC*, 117 FERC ¶ 62,261 (2006).

1 **Q. Are there additional factors present in the relevant geographic market that mitigate**
2 **the potential for Spire Storage West to exercise market power for firm and**
3 **interruptible storage services?**

4 A. Yes. As noted earlier, the Commission concluded in the Policy Statement that market
5 shares and market concentration are not the only relevant factors in assessing the ability to
6 exercise market power, but that an evaluation of other factors is also important in the
7 determination of whether a party can exercise market power. In addition to the market
8 share and market concentration analyses that indicate Spire Storage West will continue to
9 be unable to exercise market power, there are numerous additional factors that further
10 support this conclusion.

11
12 First, as the Commission has previously found, there is relative ease of entry in the relevant
13 geographic market.²⁶ While the economics for new storage development have been
14 challenging and little new storage has been developed, this has been due to the significant
15 proliferation of natural gas production throughout the United States. This significant
16 expansion of natural gas production also poses a competitive threat to storage, as evidenced
17 by the fact that natural gas storage development has slowed – not only in this geographic
18 market, but across the United States. There have been a number of previously announced
19 storage development projects in this geographic market that have not yet been constructed
20 (e.g., Magnum Gas Storage; Windy Hill Gas Storage; Blue Sky; Leader One), indicating
21 the competitiveness of the natural gas market, and also the potential to increase storage
22 capacity in the region should market fundamentals in the future justify the development of
23 additional storage.

24
25 Second, Spire Storage West will continue to be dependent upon non-affiliated interstate
26 pipelines to transport natural gas from its storage facilities to end-users. Many of these
27 same pipelines, either directly or through affiliates, own and operate their own storage

²⁶ *Ryckman Creek Resources, LLC and Canyon Creek Compression Company*, 136 FERC ¶ 61,061 (2011) at P 38 (“The Commission has previously found that barriers to entry in the Rocky Mountains Production Area are not significant and Ryckman’s market power study confirms that the relevant market is easy to enter.”)

1 facilities in the relevant geographic market as well (*i.e.*, Berkshire Hathaway;²⁷ Kinder
2 Morgan Inc. (“Kinder Morgan”); Southern Star Central Gas Pipeline Inc. (“Southern Star”))
3 that can be marketed in competition with Spire Storage West’s storage services. In addition,
4 the significant storage in the relevant geographic market owned and operated by these large
5 storage providers is provided at cost-based rates regulated by the FERC. Given this, Spire
6 Storage West’s small market share in a highly competitive storage market, make it
7 extremely difficult for Spire Storage West to exercise market power for storage services.
8

9 Third, the market share and market concentration analyses presented herein do not include
10 other potential alternatives to storage that exist in the market (*e.g.*, pipeline capacity
11 available during peak demand periods, pipeline park and loan services, and seasonal/swing
12 services provided by marketers). Neither do the analyses reflect the local production
13 outside of Wyoming, Utah and Colorado that is accessible to the Rockies production area
14 via the longer haul pipelines that traverse the region and thus can also compete with the
15 services provided by Spire Storage West’s storage facilities.
16

17 For all of the reasons noted above, it is highly unlikely that Spire Storage West will be able
18 to exercise market power if granted the authority to continue to charge market-based rates
19 for firm and interruptible storage services with the proposed expansion of the Clear Creek
20 facility. Even with the expansion, Spire Storage West will continue to be a very small
21 participant in the relevant geographic market, and will be comparable to the numerous
22 other storage providers in the same geographic market that have been granted market-based
23 rate authority by the Commission for firm and interruptible storage services.
24

²⁷ As noted in Appendices C and D, Berkshire Hathaway has announced the acquisition of Dominion Energy Inc’s natural gas assets in the United States. While the transaction has not yet closed (expected fourth quarter of 2020), for purposes of this analysis, Dominion’s assets are considered to be owned by Berkshire Hathaway.

1 **WHEELING SERVICES ANALYSIS**

2 **Q. What analyses did you conduct to evaluate Spire Storage West’s interruptible**
3 **wheeling service?**

4 A. To evaluate the interruptible wheeling service with the expansion of Clear Creek, I
5 identified the numerous pipeline interconnections in the relevant geographic market that
6 could provide customers with alternatives to the interruptible wheeling service offered by
7 Spire Storage West. Specifically, I performed two analyses consistent with the
8 Commission’s approach to evaluating wheeling services: (1) a “bingo card” analysis,
9 which is a matrix that identifies the various alternatives to Spire Storage West that market
10 participants have for wheeling natural gas between the pipelines interconnected to Spire
11 Storage West; and (2) an analysis of Spire Storage West’s market share for wheeling
12 receipt and delivery capacity relative to alternative market centers and pipeline
13 interconnects in the relevant geographic market.

14
15 These analyses are the same analyses performed by applicants seeking market-based rates
16 for firm and for interruptible wheeling services, and are the same analyses, as updated, that
17 I previously conducted as part of Spire Storage West’s application to continue to provide
18 interruptible wheeling service that was approved by the Commission.²⁸

19
20 **Q. Please explain these analyses.**

21 A. First, the Commission has used a “bingo card” analysis to assess whether prospective
22 customers of an applicant seeking market-based rate authority for wheeling services can
23 avoid the pipeline interconnections provided by the applicant by utilizing alternative
24 interconnections available between the pipelines that are directly or indirectly connected
25 to the applicant’s pipeline facilities. As mentioned previously, the Facilities are directly
26 interconnected to five pipelines: Questar, Overthrust, Kern River, Northwest, and Ruby.
27 The bingo card analysis for Spire Storage West is provided as Appendix F, which presents
28 a summary of the alternate receipt and delivery interconnections available between these

²⁸ *Spire Storage West, LLC and Clear Creek Storage Company L.L.C.*, 166 FERC ¶ 62,038 (2019).

1 interstate pipelines other than the connection via Spire Storage West’s header pipeline
2 facilities.

3
4 Second, due to its pipeline interconnections and ability to facilitate transactions across
5 pipeline systems, Spire Storage West’s facilities can also be considered a market center or
6 hub. The Commission has traditionally evaluated whether an applicant controls a dominant
7 share of either the receipt or delivery capacity relative to other hubs, market centers and
8 pipeline interconnections in the relevant market for wheeling service. There are numerous
9 interconnected interstate pipelines in the Rockies/Plains region. Specifically, for purposes
10 of this analysis, I have evaluated the receipt and delivery interconnections in the relevant
11 geographic market of pipelines that are directly and indirectly interconnected with the
12 pipelines to which Spire Storage West is interconnected.²⁹ This approach is consistent with
13 the Commission’s established approach to evaluating market share and market
14 concentration for both firm and interruptible wheeling services,³⁰ and is the approach I
15 previously conducted for Spire Storage West that was approved by the Commission. Also
16 consistent with Commission precedent, the receipt capacity and delivery capacity of each
17 of the interconnections have been analyzed separately for this analysis. The market share
18 and market concentration analyses of the competing hubs/interconnections are shown on
19 Appendix G.

20
21 **Q. What information did you rely upon to conduct the market power analyses?**

22 A. The information to conduct the wheeling analyses presented in Appendices F and G was
23 obtained from the pipelines’ informational postings on their respective electronic bulletin
24 boards. Specifically, the informational postings for each pipeline identify the name and

²⁹ The pipeline interconnections in the relevant geographic market evaluated include interconnections between Colorado Interstate Gas Co.; Wyoming Interstate Co.; TransColorado Gas Transmission; Ruby; El Paso Natural Gas Company, L.L.C.; Questar; Overthrust; White River Hub, LLC; Northwest; Southern Star; Transwestern Pipeline; Rocky Mountain Natural Gas; Overland Trail Transmission; and Rendezvous Pipeline.

³⁰ See, e.g., *UGI Storage Company*, 138 FERC ¶ 61,051 (2012); *Golden Triangle Storage, Inc.*, 152 FERC ¶ 61,158 (2015); *Magnum Gas Storage, LLC*, 157 FERC ¶ 61,114 (2016).

1 type of interconnection (*i.e.*, receipt, delivery or bi-directional) and the design or
2 operational capacity for each interconnection.³¹

3
4 **Q. What are the results of your bingo card analysis regarding Spire Storage West's**
5 **interruptible wheeling service?**

6 A. As can be seen in Appendix F, the bingo card for Spire Storage West is completely filled-
7 in, meaning that the pipelines directly interconnected to Spire Storage West are also
8 directly or indirectly interconnected with each other in various other locations in close
9 proximity to Spire Storage West. This indicates that shippers can avoid the pipeline
10 interconnections provided by Spire Storage West and rely entirely on other pipeline
11 interconnections currently available in the market to wheel natural gas if Spire Storage
12 West were to attempt to raise prices and exercise market power.

13
14 Specifically, as can be seen on Appendix F, there are 49 alternative paths between the five
15 pipelines with which Spire Storage West directly interconnects that are capable of
16 providing competing firm and interruptible transportation services. All five of the pipelines
17 with which Spire Storage West is interconnected are also interconnected to the Williams
18 Field Services plant at the Opal Hub and thus can facilitate exchanges with one another at
19 the hub instead of utilizing Spire Storage West's facilities. These alternative
20 interconnections are capable of transporting over 17.5 Bcf/d of natural gas between the
21 pipelines directly connected to Spire Storage West. In addition, as discussed below, there
22 are also many additional alternative interconnections beyond the direct interconnection
23 points of these five pipelines for shippers to further avoid Spire Storage West's facilities
24 altogether. This demonstrates that there are numerous alternatives to Spire Storage West's
25 interruptible wheeling service.

³¹ To the extent that the capacity of an interconnection point was listed differently by each interconnecting pipeline, the lower capacity value was utilized.

1
2 **Q. What are the results of the market share and the market concentration of the receipt**
3 **and delivery capacity in the relevant geographic market?**

4 A. Analyses of the market share and market concentration relevant to Spire Storage West’s
5 interruptible wheeling service are shown in Appendix G. Consistent with the
6 Commission’s established approach to evaluating market share and market concentration
7 for firm and interruptible wheeling services, receipt capacity and delivery capacity are
8 analyzed separately. In addition, because certain pipelines in the relevant geographic
9 market are jointly owned, the receipt and delivery capacity reflects each ultimate parent
10 company’s share of the capacity based on their respective ownership percentage of the
11 pipeline. Also, since certain companies own or have ownership positions in multiple
12 pipelines in the relevant geographic market, the total receipt and delivery capability has
13 been aggregated for each parent company in order to determine the market share and
14 market concentration.

15
16 As illustrated on Appendix G, Spire Storage West is a small participant in the relevant
17 geographic market that is a highly interconnected production area. Specifically, Spire
18 Storage West has a market share of 6.0% for receipt capacity and 5.5% for delivery
19 capacity for pipeline interconnects in the relevant market. As shown on Appendix G, page
20 19, there are 152 receipt and delivery interconnections in the Rockies/Plains region
21 between the various pipelines in the relevant geographic market that provide alternative
22 routes for natural gas to be wheeled in lieu of using Spire Storage West’s pipeline facilities.
23 These alternative interconnections provide over 15 times the amount of both receipt and
24 delivery capacity that Spire Storage West has with the pipelines with which it directly
25 interconnects. Spire Storage West’s market shares for receipt and delivery capacity will
26 be well below levels suggesting the likelihood of market power, and are also significantly
27 less than other storage facilities that have received market-based rate authorization from

1 the Commission.³² As such, this is indicative that Spire Storage West will continue to be
2 unable to exercise market power on a standalone-basis for interruptible wheeling service
3 in the market it competes upon the acquisition of Clear Creek.
4

5 As noted previously, the Commission relies on the HHI methodology to assess the level of
6 concentration in a market. Appendix G shows that the market concentration for receipt
7 and delivery capacity in the relevant geographic market results in HHI levels of 2720 and
8 2814, respectively, indicating that the market is concentrated. However, as shown on
9 Appendix G, the market concentration for receipt capacity is the result of two large
10 corporate entities (*i.e.*, Kinder Morgan and Berkshire Hathaway) that each own or have an
11 ownership interest in five different pipelines in the Rockies/Plains region. This results in
12 Kinder Morgan having a market share of over 40% for both receipt and delivery capacity,
13 and Berkshire Hathaway having a market share of over 23% for receipt capacity and over
14 30% for delivery capacity. While the HHI levels presented in Appendix G are above 1800
15 and indicative of a concentrated market, the vast majority of the receipt and delivery
16 capability to provide wheeling services to compete with Spire Storage West are owned by
17 interstate pipelines, including those owned by Kinder Morgan and Berkshire Hathaway, all
18 of which are subject to an obligation to provide their services on an open-access basis at
19 cost-based rates. As the Commission has found in analogous cases in the past,³³ this greatly
20 reduces the opportunity for Spire Storage West to work in conjunction with other providers
21 to exert market power for wheeling services.
22

23 All of these facts indicate that Spire Storage West will continue to be unable to exert market
24 power in providing wheeling service.
25

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

³³ *Magnum Gas Storage, LLC*, 157 FERC ¶ 61,114 (2016); *Magnum Gas Storage, LLC and Magnum Solutions, LLC*, 134 FERC ¶ 61,197 (2011).

1 **Q. In your view, are there additional factors present that mitigate the potential for Spire**
2 **Storage West to exercise market power for its interruptible wheeling service?**

3 A. Yes. For a number of reasons, the analysis presented regarding wheeling services is
4 conservative.

5
6 First, many of the pipelines in the relevant geographic market contract for capacity on one
7 another, and thus the level of interconnectedness between these pipelines is greater than
8 reflected in Appendix G. For example, Questar, Rockies Express Pipeline LLC and
9 Wyoming Interstate Company L.L.C. (“WIC”) all contract for capacity on Overthrust.
10 Colorado Interstate Gas Company, LLC also contracts for capacity on WIC. Thus, the
11 market share and market concentration of receipt and delivery point capacity to provide
12 wheeling services reflected on Appendix G is conservative in that the capacity of these
13 additional connections has not been reflected in the market shares and market concentration.

14
15 Second, an important aspect of the competitiveness of this market that is not reflected on
16 Appendix G is that there are numerous local distribution companies, producers and
17 marketers in the region that hold firm capacity on these pipelines. These parties also
18 contract for firm storage service from these pipelines. With such capacity, these local
19 distribution companies, producers and marketers are able to effectuate transactions for third
20 parties between these pipelines without relying on Spire Storage West. In other words, the
21 services that local distribution companies, producers and marketers can offer in the relevant
22 geographic market by leveraging their assets across the various pipelines (*e.g.*, through
23 exchanges, swaps, or bundled releases), compete directly with Spire Storage West’s
24 interruptible wheeling service.

25
26 Third, the market share and market concentration of receipt and delivery point capacity to
27 provide wheeling services reflected on Appendix G is conservative in that it only reflects
28 the capability of direct pipeline receipt and delivery interconnections in the relevant market
29 and does not include the ability of those pipelines to provide wheeling service via

1 displacement. If such capability had been included in the analysis, Spire Storage West’s
2 market share would be even lower.

3
4 Lastly, considering the relatively small capacity and short distance of Spire Storage West’s
5 pipeline facilities as compared to the numerous other large-scale pipeline projects that have
6 entered or expanded in the geographic market, there are relatively low barriers to entry for
7 other parties to compete. The time and resources required to compete with Spire Storage
8 West’s interruptible wheeling service would be relatively minimal. For example, between
9 the Williams Field Services plant at Opal, Wyoming and the Spire Storage West storage
10 and pipeline facilities, Ruby, Overthrust, Kern River and Northwest all traverse portions
11 of the same route through Lincoln and Uinta Counties in Wyoming. Due to the very close
12 proximity of these pipelines with one another, the cost to add additional interconnections
13 to one another would likely be relatively minimal. Thus, even if Spire Storage West were
14 to attempt to exercise market power for wheeling service, the resources required of other
15 pipelines to respond to provide shippers with alternative options would not be significant.
16 The Commission recognized in the Policy Statement that ease of entry into a market
17 inhibits the potential for parties to exercise market power, noting that: “If the seller has a
18 small market share it is unlikely that it can exercise market power. But, a company with a
19 large market share may not be able to exert market power if entry into the market is easy
20 or there are other competitive forces at work.”³⁴ Even though Spire Storage West will
21 represent a small market share for both receipt and delivery capacity in the relevant
22 geographic market, the ease of entry and the ability of other market participants to fully
23 mitigate any potential market power for interruptible wheeling service is significant.

24
25 **Q. Does this conclude your testimony?**

26 **A. Yes.**

³⁴ *Policy Statement*, at 61,234.

TOBY BISHOP

Senior Vice President

Mr. Bishop has over 25 years of management and economic consulting experience advising energy industry clients throughout the United States and Canada. Mr. Bishop has a broad range of experience covering strategic, regulatory, financial, and transactional matters. Specifically, Mr. Bishop has extensive regulatory and civil litigation experience regarding both natural gas and electric issues, including federal and state rate case proceedings, market power and competitive concerns, asset purchase and sales transactions, contractual disputes, regulatory strategy and policy formulation. In addition, Mr. Bishop has assisted numerous clients throughout North America evaluate energy markets for purposes of regulatory filings, due diligence for acquisitions and divestitures, market entry/exit and competitive assessments, and asset valuation. Mr. Bishop has testified before the Federal Energy Regulatory Commission, the National Energy Board, the Canada Energy Regulator, the Nova Scotia Utility and Review Board, and the British Columbia Utilities Commission.

PROFESSIONAL HISTORY**Concentric Energy Advisors, Inc. (2002 – Present)****REED Consulting Group/Navigant Consulting, Inc. (1995 – 2002)****Fleet National Bank (1993 – 1995)****EDUCATION****Colgate University**

B.A., Economics and Geography

REPRESENTATIVE PROJECT EXPERIENCE

Regulatory and Litigation Representation/Support

Extensive experience in the research, analysis, preparation and defense of expert testimony, reports, affidavits and other filings in over 50 administrative and civil proceedings on a wide range of energy and economic issues. Clients in these matters have included natural gas distribution companies, natural gas pipelines, natural gas storage providers, natural gas producers, electric utilities, and independent energy project developers. Testimony has focused on issues ranging from broad regulatory and economic policy, valuation for damages assessment, and management prudence, to virtually all elements of the utility ratemaking process, including cost of service, cost allocation, rate design, and cost of capital. Representative engagements have included:

- Strategic analysis for a large energy company considering alternatives for its existing pipeline and storage portfolio.



- Development of a financial model and assist in the transaction structuring for a natural gas storage developer seeking to construct and then sell a storage facility to an LDC in the western half of the U.S.
- Litigation support for the Upper Midwest Shipper Group on all aspects the Northern Natural RP19-1353 rate case proceeding.
- Litigation support for the WEC Energy Group on all aspects the Great Lakes Gas Transmission RP17-593 rate case proceeding.
- Litigation support for the Upper Midwest Distributor Group on all aspects of the Natural Gas Pipeline Company of America RP17-303 rate case proceeding.
- Litigation support, including the drafting of a reply expert report, relating to a \$500 million claim associated with the value of Ultra Petroleum Corp. exiting bankruptcy.
- Litigation support for the Upper Midwest Distributor Group on all aspects of the ANR Pipeline RP16-440 rate case proceeding.
- Litigation support, including the drafting of expert reports, on behalf of Mitsubishi Heavy Industries regarding a \$7.5 billion claim in an international arbitration proceeding regarding damages associated with the SONGS 2 and 3 nuclear facilities.
- Evaluation of potential market power and competitive concerns on over 25 occasions for leading North American energy companies covering both natural gas and electric issues. Engagements have included the preparation of independent market power analyses and supporting testimony in association with proposed mergers and market-based rate applications for underground natural gas storage facilities throughout the U.S. and Canada. These engagements have included the filing of testimony before the Federal Energy Regulatory Commission and the British Columbia Utilities Commission.
- Cost allocation and rate design witness providing ongoing litigation support on behalf of Arizona Public Service in El Paso Natural Gas Company's two most recent FERC rate cases.
- Extensive litigation support to TransCanada PipeLines before the National Energy Board, including major proceedings regarding its Mainline pipeline restructuring, changes in services, abandonment cost recovery and its comprehensive settlement to transition to a new tolling regime.
- Litigation support before the Alberta Energy Regulatory (formerly Energy Resources Conservation Board), on behalf of CrossAlta Gas Storage regarding public interest issues related to natural gas storage in a case in which an oil producer was seeking to drill through the CrossAlta storage reservoir.
- Preparing multiple rounds of testimony in support of a group of utilities, including Oncor, AEP and MidAmerican Energy, seeking to construct over \$5 billion of new transmission in Texas as part of the state's Competitive Renewable Energy Zone process.



- Litigation support to NOVA Gas Transmission Ltd. in multiple proceedings regarding the development and tolling of new facilities in British Columbia and Alberta.
- Preparing expert reports and providing litigation support to Boston Edison regarding its damages claims against the Department of Energy relating to spent nuclear fuel for Pilgrim nuclear generating station.
- Assisting ONEOK Partners in the development and implementation of two new off-system storage services for its Guardian Pipeline, including the development of the open season process for these new services, the pro forma tariff, forms of service agreement, precedent agreements between Guardian and its customers, and rate design for the new services.
- Preparation of an expert report on behalf of Merrill Lynch assessing and quantifying damages in its litigation regarding the sale of its energy trading business.
- Providing litigation support to Missouri Gas Energy to defend against proposed gas purchase disallowances for storage utilization, hedging activity and capacity release decisions.
- Providing ongoing regulatory oversight and litigation support to the Northern Distributor Group, a group of 13 local distribution companies (LDCs) in the Midwest served by Northern Natural Gas Company in FERC rate, certificate, and other regulatory matters. Included drafting testimony, comments, interventions and various other regulatory filings to be filed with the FERC.

Market Assessment

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

- Preparation of a report on behalf of the proposed Adelpia Gateway pipeline regarding the potential energy and economic benefits to natural gas and electric consumers in the Greater Philadelphia region.
- Preparation of multiple reports on behalf of the proposed PennEast Pipeline regarding the potential economic benefits of the pipeline to natural gas and electric customers in the Mid-Atlantic region, including rebuttal comments addressing issues raised by opponents of the pipeline.



- Preparing numerous assessments of the natural gas and electric markets in eastern Canada, Atlantic Canada, and the northeastern and mid-Atlantic United States for various energy companies seeking to enter the market and/or expand existing operations in the market.
- Preparing a detailed demand and supply analysis of the opportunity for underground natural gas storage in the Mid-Atlantic and upper Midwest markets.
- Evaluating the opportunity for the development of a new underground storage facility in the southeastern United States. The project included preparing a detailed report for the client that included the future market opportunity that could be achieved from the facility.
- Preparing a detailed demand/supply and risk analysis of an existing natural gas storage project in the Eastern U.S. for a commercial bank seeking to finance a partnership buyout of the facility.
- Evaluating the market opportunity for LNG in the northeastern United States for a client seeking to develop an LNG facility import terminal. The project included reviewing future demand/supply in the region and competing supplies.

Valuation

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

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



Mergers, Acquisitions and Divestitures

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

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

AVAILABLE UPON REQUEST

Extensive client and project listings, and specific references.

| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|---|-------------|---|------------------------|---------------------------------|
| Federal Energy Regulatory Commission | | | | |
| Northern Distributor Group | 10/98 | Northern Natural Gas Company | Docket No. RP98-203 | Cost Allocation |
| Central New York Oil & Gas Company, LLC | 2/06 | Central New York Oil & Gas Company, LLC | Docket No. CP06-64-000 | Market Power |
| Central New York Oil & Gas Company, LLC | 10/07 | Central New York Oil & Gas Company, LLC | Docket No. CP06-64-001 | Market Power |
| Chestnut Ridge Storage, LLC | 12/07 | Chestnut Ridge Storage, LLC | Docket No. CP08-36 | Market Power |
| Arlington Storage Company, LLC | 3/08 | Arlington Storage Company LLC | Docket No. CP08-96 | Market Power |
| Worsham-Steed Gas Storage, LP | 5/08 | Worsham-Steed Gas Storage, LP | Docket No. PR08-23 | Market Power |
| Arizona Public Service Company | 5/09 | El Paso Natural Gas Company | Docket No. RP08-426 | Cost Allocation/ Rate Design |
| Arizona Public Service Company | 7/09 | El Paso Natural Gas Company | Docket No. RP08-426 | Cost Allocation/ Rate Design |
| Arizona Public Service Company | 8/09 | El Paso Natural Gas Company | Docket No. RP08-426 | Cost Allocation/ Rate Design |
| UGI Storage Company | 11/09 | UGI Storage Company | Docket No. CP10-23 | Market Power |
| Magnum Gas Storage, LLC | 11/09 | Magnum Gas Storage, LLC | Docket No. CP10-22 | Market Power |
| East Cheyenne Gas Storage, LLC | 1/10 | East Cheyenne Gas Storage, LLC | Docket No. CP10-34 | Market Power |
| Petal Gas Storage, LLC | 1/10 | Petal Gas Storage, LLC | Docket No. CP10-50 | Market Power |
| UGI Storage Company | 2/10 | UGI Storage Company | Docket No. CP10-23 | Market Power |
| Arizona Public Service Company | 3/10 | El Paso Natural Gas Company | Docket No. RP08-426 | Rate Design |
| Arlington Storage Company, LLC | 3/10 | Arlington Storage Company LLC | Docket No. CP10-99 | Market Power |
| Tallulah Gas Storage, LLC | 8/10 | Tallulah Gas Storage, LLC | Docket No. CP10-494 | Market Power |
| Rager Mountain Storage Co. LLC | 10/10 | Rager Mountain Storage Co. LLC | Docket No. CP11-5 | Market Power |
| Central New York Oil & Gas Company, LLC | 3/11 | Central New York Oil & Gas Company, LLC | Docket No. CP10-194 | Market Power |

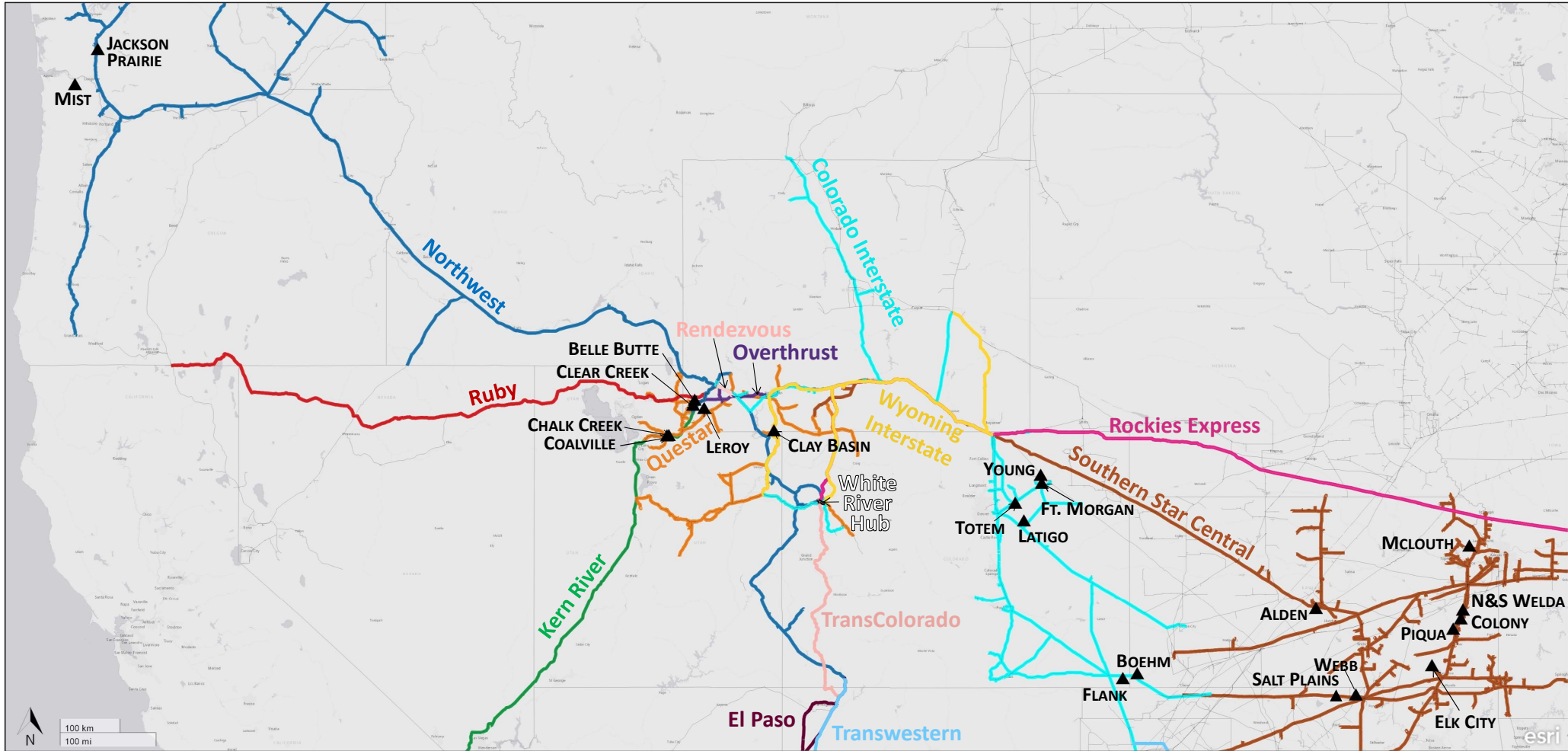


| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|---|-------------|---|----------------------|---|
| Federal Energy Regulatory Commission | | | | |
| Rager Mountain Storage Co. LLC | 3/11 | Rager Mountain Storage Co. LLC | Docket No. CP11-5 | Market Power |
| Arizona Public Service Company | 6/11 | El Paso Natural Gas Company | Docket No. RP10-1398 | Cost Allocation/Rate Design |
| Arizona Public Service Company | 8/11 | El Paso Natural Gas Company | Docket No. RP10-1398 | Cost Allocation/Rate Design |
| UGI Storage Company | 8/11 | UGI Storage Company | Docket No. CP11-542 | Market Power |
| Central New York Oil & Gas Company, LLC | 2/12 | Central New York Oil & Gas Company, LLC | Docket No. CP10-194 | Market Power |
| Worsham-Steed Gas Storage LLC | 5/12 | Worsham-Steed Gas Storage LLC | Docket No. PR07-6 | Market Power |
| Rager Mountain Storage Co. LLC | 1/14 | Rager Mountain Storage Co. LLC | Docket No. CP13-139 | Market Power |
| PennEast Pipeline Company, LLC | 9/15 | PennEast Pipeline Company, LLC | Docket No. CP15-558 | Mkt. Conditions/Need |
| Magnum Gas Storage, LLC | 11/15 | Magnum Gas Storage, LLC | Docket No. CP16-18 | Market Power |
| PennEast Pipeline Company, LLC | 4/16 | PennEast Pipeline Company, LLC | Docket No. CP15-558 | Mkt. Conditions/Need |
| PennEast Pipeline Company, LLC | 10/16 | PennEast Pipeline Company, LLC | Docket No. CP15-558 | Mkt. Conditions/Need/Rate of Return |
| Costco Wholesale Corp. | 1/17 | Tricon Energy Ltd. and Rockbriar Partners Inc. v. Colonial Pipeline Company | Docket No. OR16-17 | Petroleum/Refined Products Pipeline Capacity Prorationing |
| Laclede Gas Company | 1/17 | Spire STL Pipeline, LLC | Docket No. CP17-40 | Mkt. Conditions/Need |
| East Cheyenne Gas Storage, LLC | 11/17 | East Cheyenne Gas Storage, LLC | Docket No. CP18-11 | Market Power |
| Spire Storage West, LLC | 7/18 | Spire Storage West, LLC | Docket No. CP18-520 | Market Power |
| Washington 10 Storage Corp. | 5/20 | Washington 10 Storage Corp. | Docket No. CP20-470 | Market Power |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|---|-------|------------------------------------|---------------------------|---|
| Pennsylvania Public Utility Commission | | | | |
| UGI Utilities, Inc. | 6/20 | UGI Utilities, Inc. | Docket No. R-2019-3015162 | Economic Impacts |
| Columbia Gas of Pennsylvania, Inc. | 8/20 | Columbia Gas of Pennsylvania, Inc. | Docket No. R-2019-3018835 | Economic Impacts |
| National Energy Board of Canada | | | | |
| TransCanada PipeLines Ltd. | 12/13 | TransCanada PipeLines Ltd. | MH-1-2013 | Cost Allocation |
| NOVA Gas Transmission Ltd. | 10/17 | NOVA Gas Transmission Ltd. | MH-031-2017 | Tolling Policy for New Facilities |
| NOVA Gas Transmission Ltd. | 12/17 | NOVA Gas Transmission Ltd. | MH-031-2017 | Tolling Policy for New Facilities |
| NOVA Gas Transmission Ltd | 3/19 | NOVA Gas Transmission Ltd | RH-001-2019 | Rate Design / Tolling Policy for New Facilities |
| Canada Energy Regulator | | | | |
| NOVA Gas Transmission Ltd | 11/19 | NOVA Gas Transmission Ltd | RH-001-2019 | Rate Design / Tolling Policy for New Facilities |
| Nova Scotia Utility and Review Board | | | | |
| Nova Scotia Power Inc. | 6/19 | Nova Scotia Power Inc. | M09273 | Contracting Prudence/ Mkt. Conditions |
| British Columbia Utilities Commission | | | | |
| Unocal Canada Limited | 10/06 | Unocal Canada Limited | Project No. 3698445 | Market Power |

Appendix B



Appendix C

Market Share and Market Concentration Analysis

Working Gas

| Line No. | Company (a) | Working Gas (MMcf) (b) | Market Share (c) | HHI (d) |
|----------|------------------------------------|------------------------------|---------------------|------------|
| 1 | Spire Inc. | 55,000 | 3.0% | 9 |
| 2 | Avista Corp. | 8,528 | 0.5% | 0 |
| 3 | Berkshire Hathaway [1] | 55,778 | 3.0% | 9 |
| 4 | Brookfield Infrastructure | 15,000 | 0.8% | 1 |
| 5 | Colorado Springs Utilities | 290 | 0.0% | 0 |
| 6 | Kinder Morgan Inc. | 37,038 | 2.0% | 4 |
| 7 | Northwest Natural | 15,935 | 0.9% | 1 |
| 8 | Puget Sound Energy | 8,528 | 0.5% | 0 |
| 9 | Southern Star Central Gas Pipeline | 46,700 | 2.5% | 6 |
| 10 | Williams Cos. | 8,528 | 0.5% | 0 |
| 11 | Xcel Energy | 6,250 | 0.3% | 0 |
| 12 | Subtotal | 257,575 | | |
| 13 | Local Producer #1 | 157,807 | 8.6% | 74 |
| 14 | Local Producer #2 | 157,807 | 8.6% | 74 |
| 15 | Local Producer #3 | 157,807 | 8.6% | 74 |
| 16 | Local Producer #4 | 157,807 | 8.6% | 74 |
| 17 | Local Producer #5 | 157,807 | 8.6% | 74 |
| 18 | Local Producer #6 | 157,807 | 8.6% | 74 |
| 19 | Local Producer #7 | 157,807 | 8.6% | 74 |
| 20 | Local Producer #8 | 157,807 | 8.6% | 74 |
| 21 | Local Producer #9 | 157,807 | 8.6% | 74 |
| 22 | Local Producer #10 | 157,807 | 8.6% | 74 |
| 23 | Subtotal | 1,578,071 | | |
| 24 | Total | 1,835,646 | 100.0% | 770 |

[1] In July 2020, Berkshire Hathaway announced the acquisition of Dominion Energy's natural gas assets. While the transactions is not yet closed, for purposes of the analysis herein, it is assumed that Berkshire Hathaway is owner of the Dominion Energy natural gas storage.

Sources:

Energy Information Administration, Natural Gas Annual Respondent Query System, data available as of August 2020, and as adjusted for ownership positions based on prior Commission orders and company websites. Local production reflects peak period (winter) production based on EIA Marketed Gas Production for November 2019 through March 2020 for Wyoming, Colorado and Utah.

Appendix C

Market Share and Market Concentration Analysis

Working Gas

| Line No. | Facility (a) | State (b) | Working Gas (MMcf) (c) | Notes (d) |
|---|--------------------|--------------|------------------------------|--------------|
| Spire Inc. | | | | |
| 1 | Spire Storage West | WY | 55,000 | |
| Avista Corp. | | | | |
| 2 | Jackson Prairie | WA | 8,528 | [1] |
| Berkshire Hathaway | | | | |
| 3 | Leroy | WY | 836 | |
| 4 | Clay Basin | UT | 53,950 | |
| 5 | Chalk Creek | UT | 300 | |
| 6 | Coalville | UT | 692 | |
| 7 | Subtotal | | <u>55,778</u> | |
| Brookfield Infrastructure Partners | | | | |
| 8 | Salt Plains | OK | 15,000 | |
| Colorado Springs Utilities | | | | |
| 9 | Young | CO | 290 | [2] |
| Kinder Morgan Inc. | | | | |
| 10 | Boehm | KS | 5,229 | |
| 11 | Flank | CO | 7,713 | |
| 12 | Fort Morgan | CO | 8,496 | |
| 13 | Latigo | CO | 9,350 | |
| 14 | Totem | CO | 3,500 | [3] |
| 15 | Young | CO | 2,750 | [2] |
| 16 | Subtotal | | <u>37,038</u> | |
| NW Natural | | | | |
| 17 | Mist | OR | 15,935 | [4] |
| Puget Sound Energy | | | | |
| 18 | Jackson Prairie | WA | 8,528 | [1] |

Appendix C

Market Share and Market Concentration Analysis

Working Gas

| Line No. | Facility (a) | State (b) | Working Gas (MMcf) (c) | Notes (d) |
|---|-----------------|--------------|------------------------------|--------------|
| Southern Star Central Gas Pipeline | | | | [5] |
| 19 | Piqua | KS | 300 | |
| 20 | North Welda | KS | 4,400 | |
| 21 | McLouth | KS | 2,200 | |
| 22 | Elk City | KS | 11,800 | |
| 23 | South Welda | KS | 6,700 | |
| 24 | Alden | KS | 4,200 | |
| 25 | Colony | KS | 4,600 | |
| 26 | Webb | OK | 12,500 | |
| 27 | Subtotal | | <u>46,700</u> | |
| Williams Cos. | | | | |
| 28 | Jackson Prairie | WA | 8,528 | [1] |
| Xcel Energy | | | | |
| 29 | Totem | CO | 3,500 | [3] |
| 30 | Young | CO | 2,750 | [2] |
| 31 | Subtotal | | <u>6,250</u> | |

[1] Owned jointly by Williams Cos. (33%), PSE Energy (33%) and Avista Utilities (33%).

[2] Owned jointly by Kinder Morgan (47.5%), Xcel Energy (47.5%) and Colorado Springs Utilities (5%).

[3] Owned jointly by Kinder Morgan (50%) and Xcel Energy (50%).

[4] Provides interstate service from this facility pursuant to 95 FERC ¶ 61,242 (2001).

[5] Owned by General Electric and Caisse de depot du Québec.

Appendix D

Market Share and Market Concentration Analysis

Maximum Daily Withdrawal Capacity

| Line No. | Company (a) | Max. Withdrawal Capacity (MMcf/d) (b) | Market Share (c) | HHI (d) |
|----------|------------------------------------|--|---------------------|------------|
| 1 | Spire Inc. | 980 | 5.8% | 34 |
| 2 | Avista Corp. | 399 | 2.4% | 6 |
| 3 | Berkshire Hathaway [1] | 940 | 5.6% | 31 |
| 4 | Brookfield Infrastructure | 200 | 1.2% | 1 |
| 5 | Colorado Springs Utilities | 13 | 0.1% | 0 |
| 6 | Kinder Morgan Inc. | 1,096 | 6.5% | 42 |
| 7 | Northwest Natural | 515 | 3.1% | 9 |
| 8 | Puget Sound Energy | 399 | 2.4% | 6 |
| 9 | Southern Star Central Gas Pipeline | 1,258 | 7.5% | 56 |
| 10 | Williams Cos. | 399 | 2.4% | 6 |
| 11 | Xcel Energy | 219 | 1.3% | 2 |
| 12 | Subtotal | <u>6,417</u> | | |
| 13 | Local Producer #1 | 1,045 | 6.2% | 38 |
| 14 | Local Producer #2 | 1,045 | 6.2% | 38 |
| 15 | Local Producer #3 | 1,045 | 6.2% | 38 |
| 16 | Local Producer #4 | 1,045 | 6.2% | 38 |
| 17 | Local Producer #5 | 1,045 | 6.2% | 38 |
| 18 | Local Producer #6 | 1,045 | 6.2% | 38 |
| 19 | Local Producer #7 | 1,045 | 6.2% | 38 |
| 20 | Local Producer #8 | 1,045 | 6.2% | 38 |
| 21 | Local Producer #9 | 1,045 | 6.2% | 38 |
| 22 | Local Producer #10 | 1,045 | 6.2% | 38 |
| 23 | Subtotal | <u>10,451</u> | | |
| 24 | Total | 16,867 | 100.0% | 576 |

[1] In July 2020, Berkshire Hathaway announced the acquisition of Dominion Energy's natural gas assets. While the transactions is not yet closed, for purposes of the analysis herein, it is assumed that Berkshire Hathaway is owner of the Dominion Energy natural gas storage.

Sources:

Energy Information Administration, Natural Gas Annual Respondent Query System, data available as of August 2020, and as adjusted for ownership positions based on prior Commission orders and company websites. Local production reflects peak period (winter) production based on EIA Marketed Gas Production for November 2019 through March 2020 for Wyoming, Colorado and Utah.

Appendix D

Market Share and Market Concentration Analysis

Maximum Daily Withdrawal Capacity

| Line No. | Facility (a) | Note (b) | Withdrawal Capability (MMcf/d) (c) | Notes (d) |
|---|--------------------|-------------|---|--------------|
| Spire Inc. | | | | |
| 1 | Spire Storage West | WY | 980 | |
| Avista Corp. | | | | |
| 2 | Jackson Prairie | WA | 399 | [1] |
| Berkshire Hathaway | | | | |
| 3 | Leroy | WY | 75 | |
| 4 | Clay Basin | UT | 765 | |
| 5 | Chalk Creek | UT | 35 | |
| 6 | Coalville | UT | 65 | |
| 7 | Subtotal | | 940 | |
| Brookfield Infrastructure Partners | | | | |
| 8 | Salt Plains | OK | 200 | |
| Colorado Springs Utilities | | | | |
| 9 | Young | CO | 13 | [2] |
| Kinder Morgan Inc. | | | | |
| 10 | Boehm | KS | 124 | |
| 11 | Flank | CO | 164 | |
| 12 | Fort Morgan | CO | 450 | |
| 13 | Latigo | CO | 139 | |
| 14 | Totem | CO | 100 | [3] |
| 15 | Young | CO | 119 | [2] |
| 16 | Subtotal | | 1,096 | |
| NW Natural | | | | |
| 17 | Mist | OR | 515 | [4] |
| Puget Sound Energy | | | | |
| 18 | Jackson Prairie | WA | 399 | [1] |

Appendix D

Market Share and Market Concentration Analysis

Maximum Daily Withdrawal Capacity

| Line No. | Facility (a) | Note (b) | Withdrawal Capability (MMcf/d) (c) | Notes (d) |
|---|-----------------|-------------|---|--------------|
| Southern Star Central Gas Pipeline | | | | [5] |
| 19 | Piqua | KS | 16 | |
| 20 | North Welda | KS | 107 | |
| 21 | McLouth | KS | 224 | |
| 22 | Elk City | KS | 269 | |
| 23 | South Welda | KS | 156 | |
| 24 | Alden | KS | 134 | |
| 25 | Colony | KS | 149 | |
| 26 | Webb | OK | 203 | |
| 27 | Subtotal | | 1,258 | |
| Williams Cos. | | | | |
| 28 | Jackson Prairie | WA | 399 | [1] |
| Xcel Energy | | | | |
| 29 | Totem | CO | 100 | [3] |
| 30 | Young | CO | 119 | [2] |
| 31 | Subtotal | | 219 | |

- [1] Owned jointly by Williams Cos. (33%), PSE Energy (33%) and Avista Utilities (33%).
[2] Owned jointly by Kinder Morgan (47.5%), Xcel Energy (47.5%) and Colorado Springs Utilities (5%).
[3] Owned jointly by Kinder Morgan (50%) and Xcel Energy (50%).
[4] Provides interstate service from this facility pursuant to 95 FERC ¶ 61,242 (2001).
[5] Owned by General Electric and Caisse de depot du Québec.

Appendix E

Local Natural Gas Production as a Substitute for Firm and Interruptible Storage Service

A. Introduction

In Order No. 678, the Commission determined that it was appropriate to adopt a more expansive definition of the relevant product market for storage to reflect close substitutes for storage, including local natural gas production.¹ As the Commission stated therein, “[f]or a non-storage product to be a good alternative it must be available soon enough, have a price low enough and have a quality high enough to permit customers to substitute the alternative for the applicant’s services.”²

B. Availability and Quality Comparability of Substitutes

Storage service, including the right to inject gas and later withdraw that gas, provides the right to natural gas in the relevant market during peak periods. Natural gas in the relevant market that is produced during the winter period also provides shippers with the right to natural gas during the peak period just as does storage, and thus local production can be considered both readily available and of the same quality as gas withdrawn from storage. This is consistent with the Commission’s findings in numerous decisions previously approving market-based storage rates.³

C. Price Comparability of Substitutes

Since much of the economic value of storage is derived from the fact that customers can inject natural gas into storage during the summer when the cost of natural gas is generally less costly, and then withdraw it in the winter peak period to meet demand when the cost of natural gas is generally more costly, natural gas sourced from local production or pipeline capacity *during the winter peak period* must be price competitive in order for these alternatives to be considered viable storage substitutes. In the peak period, the price of local production can be expressed as (i) the off-peak period (*i.e.*, summer) price of natural gas; plus (ii) a peak period (*i.e.*, winter) price premium. Likewise, the price of gas injected into and withdrawn from storage can be expressed

¹ *Rate Regulation of Certain Natural Gas Storage Facilities* (“Order No. 678”), FERC Stats. & Regs. ¶ 31,220 (2006) at P 25.

² *Id.* at P 27.

³ *See, e.g., Spire Storage West, LLC and Clear Creek Storage Company, L.L.C.*, 166 FERC ¶ 62,038 (2019); *Arlington Storage Company, LLC*, 163 FERC ¶ 61,077 (2018); *Magnum Gas Storage, LLC and Magnum Solutions, LLC*, 134 FERC ¶ 61,197 (2011); *UGI Storage Company and UGI Central Penn Gas, Inc.*, 133 FERC ¶ 61,073 (2010).

Appendix E

as (i) the off-peak period (*i.e.*, summer) price of natural gas upon injection; plus (ii) the prevailing price of the storage service.

More specifically, the prevailing price of storage service is defined as the price of storage in a competitive market. Market power is appropriately defined as the ability of a party to profitably maintain prices above the competitively determined price level (*i.e.*, at a level above that which would otherwise be established in a competitive market). As the Department of Justice and Federal Trade Commission state in their Horizontal Merger Guidelines (“Guidelines”):

Market power to a seller is the ability profitably to maintain prices above competitive levels for a significant period of time. In some circumstances, a sole seller (a “monopolist”) of a product with no good substitutes can maintain a selling price that is above the level that would prevail if the market were competitive. (Department of Justice and Federal Trade Commission, 1992 Horizontal Merger Guidelines, April 2, 1992, as revised April 8, 1997).

As the Guidelines make clear, it is the ability of the seller to raise its price above the level that would prevail if the market were competitive. Therefore, consistent with this definition, the analysis herein of the price of storage reflects the price that would be established in the workably competitive Rockies/Plains storage market.

In comparing the price of local production versus the price of storage, the off-peak price of natural gas is a common component of the cost of each alternative and therefore can be eliminated since it is the same for both options. Thus, the evaluation of price comparability between local production and storage is whether the peak period price premium is less than the prevailing market-based price of storage service in the relevant geographic market.

a) Determination of the Peak Period Price Premium

The peak period price premium in the relevant geographic market is calculated based on the projected summer/winter seasonal price spread based on natural gas futures prices in the relevant geographic market. Specifically, the peak period price premium for this analysis is calculated as the difference between the average Northwest Pipeline Opal futures price for the summer of 2021 (*i.e.*, April through October 2021) versus the average of the same futures price for the winter of 2021/2022 (*i.e.*, November 2021 through March 2022). For purposes of this analysis, futures pricing information over the prior five trading days was evaluated to provide a range of data and to alleviate the potential for anomalous results of a particular trading day. As shown in Figure E-1, the average peak period price premium is \$0.48/Mcf.

Appendix E

Figure E-1: NYMEX Natural Gas Futures Seasonal Price Spreads – Northwest Opal WY
Futures Price (\$/Mcf)⁴

| | As of 8/19/2020 | As of 8/20/2020 | As of 8/21/2020 | As of 8/24/2020 | As of 8/25/2020 | Avg. Over Prior Five Trading Days |
|---------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---|
| Apr-2021 | \$ 2.36 | \$ 2.36 | \$ 2.36 | \$ 2.39 | \$ 2.36 | |
| May-2021 | \$ 2.33 | \$ 2.33 | \$ 2.33 | \$ 2.37 | \$ 2.34 | |
| Jun-2021 | \$ 2.38 | \$ 2.38 | \$ 2.38 | \$ 2.41 | \$ 2.38 | |
| Jul-2021 | \$ 2.55 | \$ 2.56 | \$ 2.55 | \$ 2.60 | \$ 2.56 | |
| Aug-2021 | \$ 2.56 | \$ 2.57 | \$ 2.56 | \$ 2.61 | \$ 2.57 | |
| Sep-2021 | \$ 2.52 | \$ 2.53 | \$ 2.52 | \$ 2.57 | \$ 2.53 | |
| Oct-2021 | \$ 2.49 | \$ 2.50 | \$ 2.49 | \$ 2.53 | \$ 2.49 | |
| Nov-2021 | \$ 2.68 | \$ 2.68 | \$ 2.69 | \$ 2.68 | \$ 2.68 | |
| Dec-2021 | \$ 3.16 | \$ 3.16 | \$ 3.16 | \$ 3.16 | \$ 3.16 | |
| Jan-2022 | \$ 3.23 | \$ 3.23 | \$ 3.23 | \$ 3.23 | \$ 3.23 | |
| Feb-2022 | \$ 3.11 | \$ 3.11 | \$ 3.11 | \$ 3.11 | \$ 3.11 | |
| Mar-2022 | \$ 2.55 | \$ 2.55 | \$ 2.56 | \$ 2.56 | \$ 2.56 | |
| Summer 2021 | \$ 2.46 | \$ 2.46 | \$ 2.46 | \$ 2.50 | \$ 2.46 | \$ 2.47 |
| Winter 2021/2022 | \$ 2.95 | \$ 2.95 | \$ 2.95 | \$ 2.95 | \$ 2.95 | \$ 2.95 |
| Peak Period Price Premium | \$ 0.49 | \$ 0.49 | \$ 0.49 | \$ 0.45 | \$ 0.49 | \$ 0.48 |

b) Price of Storage

Whether local production is to be considered a reasonable substitute to storage, the price should be no greater than the competitive price of storage in the relevant geographic market plus 10%.⁵ However, unlike natural gas prices, there are no spot prices published for the market price of storage. Since many of the newer storage developments in the relevant geographic market are priced at market-based rates, pricing information for these storage facilities is not publicly available. While there is a significant amount of storage in the market that is cost-based, these facilities are generally older facilities that are heavily depreciated and thus are not representative of the cost to develop new storage nor are reflective of the market price for storage in the relevant market. Therefore, the cost of new entry (*i.e.*, the cost of new storage development in the relevant market) has been evaluated as a proxy for the competitive market price of storage. There are, however, a number of factors that affect the cost of new storage development, and thus the pricing of storage, including the location of the development, the type of storage being developed (*i.e.*,

⁴ S&P Global Market Intelligence; prices as reported by OTC Global Holdings.

⁵ In the Policy Statement, FERC adopted a “price increase threshold” of ten percent. The price increase threshold represents a percentage amount over and above an applicant’s maximum cost-based rate. If an applicant were able to increase its prices to (and sustain them at) 110% or more of its maximum market-based rate, then FERC presumes it would be able to exercise market power. (*See, Policy Statement*, 74 FERC ¶ 61,076 at 61,231 (1996)).

Appendix E

depleted reservoir, salt cavern) and the complexity of the development. As such, there is not a single point of reference for the market price of storage, but rather a range that would be reflective of current storage pricing. Although market pricing for storage is not publicly available, as noted previously in an application for market-based storage rates approved by the Commission, the estimated range of prices for incremental storage was \$2.00/Mcf to \$3.00/Mcf of capacity.⁶ These estimated costs of underground storage development are ten years old, and it has been widely recognized that the cost to develop storage have increased, not decreased, as a result of inflationary factors, as well as the increasing time and cost associated with the development of nearly any new natural gas infrastructure. Thus, the cost range of \$2.00/Mcf to \$3.00/Mcf is likely conservative.

c) Conclusion Regarding Price Comparability

As noted above, local production during peak periods is considered comparable to storage from an availability and quality perspective. In addition, the peak period price premium in the relevant geographic market for the upcoming gas year (*i.e.*, \$0.48/Mcf) is significantly lower than the conservatively estimated cost associated with new storage development (*i.e.*, \$2.00 - \$3.00/Mcf), which indicates that it is reasonable to consider local production as an alternative to storage on the basis of price.

Moreover, the fact that the significant development of unconventional natural gas shale resources, including those in the Rockies, has stagnated the development of underground natural gas storage throughout the United States is additional evidence that local production is price competitive with natural gas storage and is reasonably considered a competitive alternative.

D. Determining Amount of Local Production

Based on the finding that local production during peak periods is a reasonable substitute to storage, local production is reflected in the market share and market concentration analyses reflected in Appendices C and D. Local production over the peak period is considered a substitute for storage capacity, while the average daily local production of the peak period is considered a substitute for the maximum daily withdrawal capability associated with storage in the relevant geographic market.

The local natural gas production data used to conduct the market power analyses reflected in Appendices C and D are based on the actual monthly natural gas marketed production by state as published by the U.S. Energy Information Administration (“EIA”) for Colorado, Wyoming and Utah.⁷ For the most recent peak winter period (*i.e.*, November 2019 through March 2020), the

⁶ *UGI Storage Company and UGI Central Penn Gas, Inc.*, 133 FERC ¶ 61,073 (2010).

⁷ Energy Information Administration, accessible at: https://www.eia.gov/dnav/ng/ng_prod_sum_a_EPG0_VGM_mmc_f_m.htm.

Appendix E

natural gas production in these three states totaled 1,578 Bcf, or a daily average of more than 10 Bcf/d over this period. For purposes of this analysis, the production has been assumed to be developed equally by ten producers as a substitute for storage in the relevant geographic market. This is likely to overstate the degree of concentration in the market, and thus be conservative, considering there are many more than ten producers in the relevant geographic market that compete with storage providers and one another to meet the needs of customers. Reflecting the production in this manner is consistent with the approach previously approved by the Commission for Spire Storage West,⁸ as well as various other applicants seeking authorization to charge market-based rates for firm and interruptible storage services, including in this same relevant geographic market.⁹

⁸ *Spire Storage West, LLC and Clear Creek Storage Company, L.L.C.*, 166 FERC ¶ 62,038 (2019).

⁹ *See, e.g., Magnum Gas Storage, LLC and Magnum Solutions, LLC*, 134 FERC ¶ 61,197 (2011); *UGI Storage Company and UGI Central Penn Gas, Inc.*, 133 FERC ¶ 61,073 (2010).

Appendix F

"Bingo Card" Analysis
Total Capacity of Interconnections Available to Pipelines Connected to Spire Storage West [1]

| | | Delivering Pipelines (MMcf/day) | | | | |
|--------------------------------|-----------------------------|---------------------------------|------------------|-----------------------------|--------------------|---------------------|
| | | Ruby Pipeline | Questar Pipeline | Questar Overthrust Pipeline | Northwest Pipeline | Kern River Pipeline |
| Receiving Pipelines (MMcf/day) | Ruby Pipeline | | 36 | 2,197 | 663 | 1,643 |
| | Questar Pipeline | 36 | | 847 | 446 | 507 |
| | Questar Overthrust Pipeline | 1,000 | 492 | | 663 | 1,100 |
| | Northwest Pipeline | 663 | 446 | 850 | | 863 |
| | Kern River Pipeline | 1,643 | 487 | 1,920 | 1060 | |

Source: Pipeline company informational postings of design/operating capacity.

[1] Pipelines directly interconnected to Spire Storage West can deliver and receive gas from one another via displacement through Williams Field Services at Opal, Wyoming. The capability of these interconnections has been reflected in the transfer capabilities reflected in the Bingo Card analysis above. The use of indirect interconnections has been accepted in prior applications for market-based rate authorization approved by the Commission (see, e.g., *MoBay Storage Hub, Inc.*, 117 FERC ¶ 61,298 (2006)), including previously for Spire Storage West (see, *Spire Storage West, LLC and Clear Creek Storage Company L.L.C.*, 166 FERC ¶ 62,038 (2019)).

Appendix F

Delivery and Receipt Capacity of Interstate Pipelines Directly or Indirectly Connected to Spire Storage West

| Line No. | Pipeline (a) | State (b) | Notes (c) | Capacity (Mcf/d) (d) |
|-----------------------------------|--------------------------------|--------------|--------------|----------------------------|
| Ruby Pipeline Delivery to: | | | | |
| | Questar Pipeline | | | |
| 1 | Opal / Williams Field Services | WY | [1]&[2] | 35,500 |
| 2 | Subtotal | | | <u>35,500</u> |
| | Questar Overthrust Pipeline | | | |
| 3 | Opal / Williams Field Services | WY | [1] | 1,000,000 |
| 4 | Subtotal | | | <u>1,000,000</u> |
| | Northwest Pipeline | | | |
| 5 | Opal / Williams Field Services | WY | [1] | 662,900 |
| 6 | Subtotal | | | <u>662,900</u> |
| | Kern River Pipeline | | | |
| 7 | Opal / Williams Field Services | WY | [1] | 1,643,100 |
| 8 | Subtotal | | | <u>1,643,100</u> |

- [1] Ruby can deliver to each of the pipelines interconnecting to Spire Storage West via displacement of volumes out of Williams Field Services plant at Opal, Wyoming.
- [2] Questar has capacity rights to various points on Overthrust using Overthrust capacity as indicated.

Appendix F

Delivery and Receipt Capacity of Interstate Pipelines Directly or Indirectly Connected to Spire Storage West

| Line No. | Pipeline (a) | State (b) | Notes (c) | Capacity (Mcf/d) (d) |
|--------------------------------------|--------------------------------|--------------|--------------|----------------------------|
| Questar Pipeline Delivery to: | | | | |
| Ruby Pipeline | | | | |
| 1 | Ruby from QPC | WY | [1] | 1,000 |
| | Opal / Williams Field Services | WY | [1]&[2] | 5,000 |
| 2 | Opal / Williams Field Services | WY | [1]&[2] | 30,000 |
| 3 | Subtotal | | | 36,000 |
| Questar Overthrust Pipeline | | | | |
| 4 | Kanda/Col | WY | | 300,000 |
| 5 | Granger | WY | | 117,320 |
| 6 | Eakin | WY | | 75,000 |
| 7 | Subtotal | | | 492,320 |
| Northwest Pipeline | | | | |
| 8 | XO-16-NWP / Crossover | WY | [1] | 80,640 |
| 9 | Clay Basin | UT | | 330,000 |
| 10 | Opal / Williams Field Services | WY | [1]&[2] | 5,000 |
| 11 | Opal / Williams Field Services | WY | [1]&[2] | 30,000 |
| 12 | Subtotal | | | 445,640 |
| Kern River Pipeline | | | | |
| 13 | Roberson Creek | WY | [1] | 4,836 |
| 14 | Goshen | UT | | 367,000 |
| 15 | Roberson through Kanda | WY | [1] | 40,000 |
| 16 | Roberson via Kanda-2 | WY | | 40,000 |
| 17 | Opal / Williams Field Services | WY | [1]&[2] | 5,000 |
| 18 | Opal / Williams Field Services | WY | [1]&[2] | 30,000 |
| 19 | Subtotal | | | 486,836 |

[1] Questar has capacity rights to various points on Overthrust using Overthrust capacity as indicated.

[2] Questar can deliver to these pipelines interconnecting to Spire Storage West via displacement of volumes out of Williams Field Services plant at Opal, Wyoming.

Appendix F

Delivery and Receipt Capacity of Interstate Pipelines Directly or Indirectly Connected to Spire Storage West

| Line No. | Pipeline (a) | State (b) | Notes (c) | Capacity (Mcf/d) (d) |
|---|--------------------------------|--------------|--------------|----------------------------|
| Questar Overthrust Pipeline Delivery to: | | | | |
| | Ruby Pipeline | | | |
| 1 | Topaz Ridge | WY | | 1,196,800 |
| 2 | Opal / Williams Field Services | WY | | 1,000,000 |
| 3 | Subtotal | | | 2,196,800 |
| | Questar Pipeline | | | |
| 4 | JL 36 MS/ Whitney Canyon | WY | | 262,000 |
| 5 | Eakin | WY | | 118,000 |
| 6 | QPC X016 | WY | | 350,000 |
| 7 | QPC JL95 Interconnect | WY | | 69,100 |
| 8 | Pioneer Plt to QPC/Eakin | WY | | 48,000 |
| 9 | Subtotal | | | 847,100 |
| | Northwest Pipeline | | | |
| 10 | Overthrust/NWP | WY | | 187,000 |
| 11 | Opal / Williams Field Services | WY | | 662,900 |
| 12 | Subtotal | | | 849,900 |
| | Kern River Pipeline | | | |
| 13 | Overthrust 121 / KRGT Painter | WY | | 220,000 |
| 14 | Hams Fork | WY | | 450,000 |
| 15 | Roberson Creek | WY | | 250,000 |
| 16 | Opal / Williams Field Services | WY | | 1,000,000 |
| 17 | Subtotal | | | 1,920,000 |

Appendix F

Delivery and Receipt Capacity of Interstate Pipelines Directly or Indirectly Connected to Spire Storage West

| Line No. | Pipeline (a) | State (b) | Notes (c) | Capacity (Mcf/d) (d) |
|--|--------------------------------|--------------|--------------|----------------------------|
| Northwest Pipeline Delivery to: | | | | |
| | Ruby Pipeline | | | |
| 1 | Opal / Williams Field Services | WY | [1] | 662,900 |
| 2 | Subtotal | | | 662,900 |
| | Questar Pipeline | | | |
| 3 | XO-16-NWP / Crossover | WY | | 80,640 |
| 4 | Clay Basin | UT | | 330,000 |
| 5 | Opal / Williams Field Services | WY | [1]&[2] | 5,000 |
| 6 | Opal / Williams Field Services | WY | [1]&[2] | 30,000 |
| 7 | Subtotal | | | 445,640 |
| | Questar Overthrust Pipeline | | | |
| 8 | Opal / Williams Field Services | WY | [1] | 662,900 |
| 9 | Subtotal | | | 662,900 |
| | Kern River Pipeline | | | |
| 10 | Muddy Creek | WY | | 397,100 |
| 11 | Opal / Williams Field Services | WY | [1] | 662,900 |
| 12 | Subtotal | | | 1,060,000 |

- [1] Northwest can deliver to these pipelines interconnecting to Spire Storage West via displacement of volumes out of Williams Field Services plant at Opal, Wyoming.
- [2] Questar has capacity rights to various points on Overthrust using Overthrust capacity as indicated.

Appendix F

Delivery and Receipt Capacity of Interstate Pipelines Directly or Indirectly Connected to Spire Storage West

| Line No. | Pipeline (a) | State (b) | Notes (c) | Capacity (Mcf/d) (d) |
|---|--------------------------------|--------------|--------------|----------------------------|
| Kern River Pipeline Delivery to: | | | | |
| | Ruby Pipeline | | | |
| 1 | Opal / Williams Field Services | WY | [1] | 1,643,100 |
| 2 | Subtotal | | | 1,643,100 |
| | Questar Pipeline | | | |
| 3 | Goshen | UT | | 367,000 |
| 4 | Roberson Creek | WY | [2] | 105,000 |
| 5 | Opal / Williams Field Services | WY | [1]&[2] | 5,000 |
| 6 | Opal / Williams Field Services | WY | [1]&[2] | 30,000 |
| 7 | Subtotal | | | 507,000 |
| | Questar Overthrust Pipeline | | | |
| 8 | Roberson Creek | WY | | 100,000 |
| 9 | Opal / Williams Field Services | WY | [1] | 1,000,000 |
| 10 | Subtotal | | | 1,100,000 |
| | Northwest Pipeline | | | |
| 11 | Muddy Creek | WY | | 200,000 |
| 12 | Opal / Williams Field Services | WY | [1] | 662,900 |
| 13 | Subtotal | | | 862,900 |

[1] Kern River can deliver to these pipelines interconnecting to Spire Storage West via displacement of volumes out of Williams Field Services plant at Opal, Wyoming.

[2] Questar has capacity rights to various points on Overthrust using Overthrust capacity as indicated.

Appendix G

Market Share and Market Concentration Analysis of Receipt and Delivery Capacity of Hubs, Market Centers and Pipeline Interconnects in Proximity to Spire Storage West

| Line No. | Company | Notes | Receipt Capacity (MMcf/d) | Market Share | HHI |
|--------------------------|--|-------|---------------------------|---------------|-------------|
| | (a) | (b) | (c) | (d) | (e) |
| Receipt Capacity: | | | | | |
| 1 | Spire [1] | | | | |
| 2 | Kern River Pipeline | | 711 | 2.3% | |
| 3 | Northwest Pipeline | | 75 | 0.2% | |
| 4 | Questar Overthrust Pipeline | | 424 | 1.4% | |
| 5 | Questar Pipeline | | 210 | 0.7% | |
| 6 | Ruby Pipeline | | 400 | 1.3% | |
| 7 | Subtotal | | 1,820 | 6.0% | 36 |
| 8 | Pipeline Interconnects [2] | | | | |
| 9 | Berkshire Hathaway | [3] | | | |
| 10 | Kern River Gas Transmission | | 2,397 | 7.9% | 62 |
| 11 | Questar Pipeline Co | | 2,356 | 7.7% | |
| 12 | Questar Overthrust Pipeline Co | | 2,065 | 6.8% | |
| 13 | Rendezvous Pipeline | | 0 | 0.0% | |
| 14 | White River Hub, LLC | [6] | 375 | 1.2% | |
| 15 | Subtotal | | 7,194 | 23.7% | 560 |
| 16 | Black Hills Corp | [4] | 154 | 0.5% | 0 |
| 17 | Caisse de dépôt et placement du Québec | [5] | 57 | 0.2% | 0 |
| 18 | Energy Transfer Partners | [7] | 276 | 0.9% | 1 |
| 19 | Enterprise Products Partners | [6] | 375 | 1.2% | 2 |
| 20 | General Electric Kinder Morgan | [5] | 57 | 0.2% | 0 |
| 21 | Colorado Interstate Gas Co | | 6,630 | 21.8% | |
| 22 | El Paso Natural Gas | | 407 | 1.3% | |
| 23 | Ruby Pipeline | [8] | 764 | 2.5% | |
| 24 | TransColorado Gas Transmission | | 1,421 | 4.7% | |
| 25 | Wyoming Interstate Co | | 3,968 | 13.0% | |
| 26 | Subtotal | | 13,188 | 43.4% | 1881 |
| 27 | Phillips 66 | [9] | 981 | 3.2% | 10 |
| 28 | Tallgrass Energy | [9] | 2,944 | 9.7% | 94 |
| 29 | Veresen | [8] | 764 | 2.5% | 6 |
| 30 | Western Gas Partners | [10] | 100 | 0.3% | 0 |
| 31 | Williams Cos. | [11] | 2,496 | 8.2% | 67 |
| 32 | Total | | 30,406 | 100.0% | 2720 |

Notes:

- [1] Represents the combined interconnection capability of Spire Storage West.
- [2] Excludes capacity via displacement at such interconnects, which if included, would significantly increase the capacity reflected.
- [3] Berkshire Hathaway has announced acquisition of Dominion Energy's natural gas assets. For purposes of this analysis, Berkshire Hathaway is assumed to own those assets.
- [4] Owns the intrastate pipeline Rocky Mountain Natural Gas.
- [5] Southern Star Central jointly owned by Caisse de dépôt et placement du Québec (50%) and GE (50%).
- [6] White River Hub jointly owned by Berkshire Hathaway (50%) and Enterprise Products Partners (50%).
- [7] Owns Transwestern Pipeline.
- [8] Ruby Pipeline jointly owned by Kinder Morgan (50%) and Veresen, Inc. (50%).
- [9] Rockies Express Pipeline jointly owned by Tallgrass Energy (75%) and Phillips 66 (25%).
- [10] Owns the intrastate pipeline Overland Trail Transmission.
- [11] Owns Northwest Pipeline.

Source: Pipeline informational postings of operationally available/design capacity.

Appendix G

Market Share and Market Concentration Analysis of Receipt and Delivery Capacity of Hubs, Market Centers and Pipeline Interconnects in Proximity to Spire Storage West

| Line No. | Company | Notes | Delivery Capacity (MMcf/d) | Market Share | HHI |
|----------------------------------|--|-------|----------------------------|---------------|-------------|
| | (a) | (b) | (c) | (d) | (e) |
| <u>Delivery Capacity:</u> | | | | | |
| 1 | Spire [1] | | | | |
| 2 | Kern River Pipeline | | 555 | 1.8% | |
| 3 | Northwest Pipeline | | 75 | 0.2% | |
| 4 | Questar Overthrust Pipeline | | 424 | 1.4% | |
| 5 | Questar Pipeline | | 210 | 0.7% | |
| 6 | Ruby Pipeline | | 400 | 1.3% | |
| 7 | Subtotal | | 1,664 | 5.5% | 30 |
| 8 | Pipeline Interconnects [2] | | | | |
| 9 | Berkshire Hathaway | [3] | | | |
| 10 | Kern River Gas Transmission | | 667 | 2.2% | 5 |
| 11 | Questar Pipeline Co | | 2,026 | 6.7% | |
| 12 | Questar Overthrust Pipeline Co | | 4,626 | 15.3% | |
| 13 | Rendezvous Pipeline | | 450 | 1.5% | |
| 14 | White River Hub, LLC | [6] | 1,803 | 6.0% | |
| 15 | Subtotal | | 9,572 | 31.7% | 1004 |
| 16 | Black Hills Corp | [4] | 263 | 0.9% | 1 |
| 17 | Caisse de dépôt et placement du Québec | [5] | 44 | 0.1% | 0 |
| 18 | Energy Transfer Partners | [7] | 120 | 0.4% | 0 |
| 19 | Enterprise Products Partners | [6] | 1,803 | 6.0% | 36 |
| 20 | General Electric Kinder Morgan | [5] | 44 | 0.1% | 0 |
| 21 | Colorado Interstate Gas Co | | 3,931 | 13.0% | |
| 22 | El Paso Natural Gas | | 0 | 0.0% | |
| 23 | Ruby Pipeline | [8] | 0 | 0.0% | |
| 24 | TransColorado Gas Transmission | | 1,273 | 4.2% | |
| 25 | Wyoming Interstate Co | | 7,118 | 23.6% | |
| 26 | Subtotal | | 12,323 | 40.8% | 1664 |
| 27 | Phillips 66 | [9] | 552 | 1.8% | 3 |
| 28 | Tallgrass Energy | [9] | 1,657 | 5.5% | 30 |
| 29 | Veresen | [8] | 0 | 0.0% | 0 |
| 30 | Western Gas Partners | [10] | 241 | 0.8% | 1 |
| 31 | Williams Cos. | [11] | 1,927 | 6.4% | 41 |
| 32 | Total | | 30,209 | 100.0% | 2814 |

Notes:

- [1] Represents the combined interconnection capability of Spire Storage West.
- [2] Excludes capacity via displacement at such interconnects, which if included, would significantly increase the capacity reflected.
- [3] Berkshire Hathaway has announced acquisition of Dominion Energy's natural gas assets. For purposes of this analysis, Berkshire Hathaway is assumed to own those assets.
- [4] Owns the intrastate pipeline Rocky Mountain Natural Gas.
- [5] Southern Star Central jointly owned by Caisse de dépôt et placement du Québec (50%) and GE (50%).
- [6] White River Hub jointly owned by Berkshire Hathaway (50%) and Enterprise Products Partners (50%).
- [7] Owns Transwestern Pipeline.
- [8] Ruby Pipeline jointly owned by Kinder Morgan (50%) and Veresen, Inc. (50%).
- [9] Rockies Express Pipeline jointly owned by Tallgrass Energy (75%) and Phillips 66 (25%).
- [10] Owns the intrastate pipeline Overland Trail Transmission.
- [11] Owns Northwest Pipeline.

Source: Pipeline informational postings of operationally available/design capacity.

Appendix G

Detail of Receipt and Delivery Capacity of Hubs, Market Centers and Pipeline Interconnects In Proximity to Spire Storage West

| Line No. | Pipeline (a) | County (b) | State (c) | Capacity (Mcf/d) (e) |
|------------------------------------|---|---------------|--------------|----------------------------|
| Kern River Deliveries (to): | | | | |
| | Questar | | | |
| 1 | Roberson Creek Delivery - (Uses Overthrust Capacity) | Lincoln | WY | [1] |
| 2 | Goshen Delv - Questar Pipeline | Utah | UT | <u>367,000</u> |
| 3 | Subtotal | | | 367,000 |
| | Overthrust | | | |
| 4 | Roberson Creek Delivery | Lincoln | WY | 100,000 |
| | Northwest | | | |
| 5 | Muddy Creek | Lincoln | WY | 200,000 |
| | Rockies Express Pipeline | | | |
| 6 | Roberson Creek (OT #818) - (Uses Overthrust Capacity) | Lincoln | WY | [1] |
| 7 | Total | | | 667,000 |

[1] Deliveries to this point are achieved via capacity on another pipeline (as noted).

Appendix G

Detail of Receipt and Delivery Capacity of Hubs, Market Centers and Pipeline Interconnects In Proximity to Spire Storage West

| Line No. | Pipeline (a) | County (b) | State (c) | Capacity (Mcf/d) (d) |
|--|--------------------------|---------------|--------------|----------------------------|
| Rocky Mountain Natural Gas Deliveries (to): | | | | |
| | TransColorado | | | |
| 1 | Olathe Montrose/Naturita | Montrose | CO | 163,517 |
| 2 | Roan Cliffs | Garfield | CO | 58,058 |
| 3 | Subtotal | | | 221,575 |
| | Colorado Interstate Gas | | | |
| 4 | Dudley Bluff | Rio Blanco | CO | 41,000 |
| 5 | Total | | | 262,575 |

Appendix G

**Detail of Receipt and Delivery Capacity
of Hubs, Market Centers and Pipeline Interconnects
In Proximity to Spire Storage West**

| Line No. | Pipeline | County | State | Capacity (Mcf/d) |
|---|----------------------------------|---------------|--------------|-------------------------|
| | (a) | (b) | (c) | (d) |
| Southern Star Central Deliveries (to): | | | | |
| 1 | Questar Skull Creek | Sweetwater | WY | 22,500 |
| 2 | Colorado Interstate Gas Riner | Sweetwater | WY | 65,000 |
| 3 | Total | | | 87,500 |

Appendix G

Detail of Receipt and Delivery Capacity of Hubs, Market Centers and Pipeline Interconnects In Proximity to Spire Storage West

| Line No. | Pipeline (a) | County (b) | State (c) | Capacity (Mcf/d) (d) |
|--|--|---------------|--------------|----------------------------|
| Questar Pipeline Deliveries (to): | | | | |
| Kern River | | | | |
| 1 | Roberson Creek - (Uses Overthrust Capacity) | Lincoln | WY | [1] |
| 2 | Goshen | Utah | UT | 367,000 |
| 3 | Roberson thru Kanda - (Uses Overthrust Capacity) | Sweetwater | WY | [1] |
| 4 | Roberson via Kanda-2 - (Uses Overthrust Capacity) | Sweetwater | WY | [1] |
| 5 | Subtotal | | | <u>367,000</u> |
| Overthrust | | | | |
| 6 | Kanda/Col | Sweetwater | WY | 300,000 |
| 7 | Granger | Sweetwater | WY | 117,320 |
| 8 | Eakin | Uinta | WY | 75,000 |
| 9 | Subtotal | | | <u>492,320</u> |
| Northwest | | | | |
| 10 | XO-16-NWP / Crossover - (Uses Overthrust Capacity) | Sweetwater | WY | [1] |
| 11 | Clay Basin | Daggett | UT | 330,000 |
| 12 | Subtotal | | | <u>330,000</u> |
| Colorado Interstate Gas | | | | |
| 13 | Kanda/Col CIG Del | Sweetwater | WY | 178,400 |
| 14 | DEQ/WIC (KAW) KANDA TO WIC-QUESTAR - (Uses WIC Capacity) | Sweetwater | WY | [1] |
| 15 | Subtotal | | | <u>178,400</u> |
| Wyoming Interstate Co | | | | |
| 16 | Kanda/Col WIC Del | Sweetwater | WY | 330,000 |

[1] Deliveries to this point are achieved via capacity on another pipeline (as noted).

Appendix G

Detail of Receipt and Delivery Capacity of Hubs, Market Centers and Pipeline Interconnects In Proximity to Spire Storage West

| Line No. | Pipeline (a) | County (b) | State (c) | Capacity (Mcf/d) (d) |
|--|--|---------------|--------------|----------------------------|
| Questar Pipeline Deliveries (to): | | | | |
| | Rockies Express | | | |
| 1 | QPC To REX - (Uses White River Hub Capacity) | Rio Blanco | CO | [1] |
| 2 | QPC/REX KANDA COLEMAN (OT #5) - (Uses Overthrust Capacity) | Sweetwater | WY | [1] |
| 3 | QPC/REX EAKIN REC (OT #21) - (Uses Overthrust Capacity) | Uinta | WY | [1] |
| 4 | QPC/REX NAUGHTON (OT#20) - (Uses Overthrust Capacity) | Lincoln | WY | [1] |
| 5 | QPC/REX GRANGER (OT#14) - (Uses Overthrust Capacity) | Sweetwater | WY | [1] |
| | Subtotal | | | |
| 6 | White River Hub Wolf Creek | Rio Blanco | CO | 200,000 |
| 7 | Southern Star Skull Creek | Sweetwater | WY | 48,460 |
| 8 | TransColorado Greasewood | Rio Blanco | CO | 80,000 |
| 9 | Ruby RUBY FROM QPC - (Uses Overthrust Capacity) | Lincoln | WY | [1] |
| 10 | Total | | | 2,026,180 |

[1] Deliveries to this point are achieved via capacity on another pipeline (as noted).

Appendix G

Detail of Receipt and Delivery Capacity of Hubs, Market Centers and Pipeline Interconnects In Proximity to Spire Storage West

| Line No. | Pipeline (a) | County (b) | State (c) | Capacity (Mcf/d) (d) |
|---|--|---------------|--------------|----------------------------|
| Overthrust Pipeline Deliveries (to): | | | | |
| | Kern River | | | |
| 1 | Overthrust 121 / KRGT Painter | Uinta | WY | 220,000 |
| 2 | Hams Fork | Lincoln | WY | 450,000 |
| 3 | Roberson Creek | Lincoln | WY | 250,000 |
| 4 | Subtotal | | | 920,000 |
| | Questar | | | |
| 5 | QPC Whitney Canyon | Uinta | WY | 262,000 |
| 6 | OTPL to QPC Eakin | Uinta | WY | 105,000 |
| 7 | OTPL to QPC X016 | Sweetwater | WY | 350,000 |
| 8 | QPC to JL95 Interconnect | Lincoln | WY | 69,100 |
| 9 | Pioneer Plant to QPC Eakin | | | 48,000 |
| 10 | Granger OTPL to QPC/WTNY | Sweetwater | WY | 17,000 |
| 11 | Subtotal | | | 851,100 |
| 12 | Northwest Overthrust/NWP Delivery | Sweetwater | WY | 187,000 |
| 13 | Wyoming Interstate Co Overthrust to WIC | Sweetwater | WY | 470,800 |
| 14 | Rockies Express Wamsutter M&R | Sweetwater | WY | 1,000,000 |
| 15 | Ruby Ruby Topaz Delivery | Lincoln | WY | 1,196,800 |
| 15 | Colorado Interstate Gas Company DEOPL/WIC (OVW) OVERTHRUST/ WIC - (Uses WIC Capacity) | Sweetwater | WY | [1] |
| 16 | Total | | | 4,625,700 |

[1] Deliveries to this point are achieved via capacity on another pipeline (as noted).

Appendix G

**Detail of Receipt and Delivery Capacity
of Hubs, Market Centers and Pipeline Interconnects
In Proximity to Spire Storage West**

| Line No. | Pipeline | County | State | Capacity (Mcf/d) |
|----------------------------|---|---------------|--------------|-------------------------|
| | (a) | (b) | (c) | (d) |
| Rendezvous Pipeline | | | | |
| 1 | Kern River Rendezvous - Rendezvous P/L | Lincoln | WY | 450,000 |
| 2 | Total | | | 450,000 |

Appendix G

Detail of Receipt and Delivery Capacity of Hubs, Market Centers and Pipeline Interconnects In Proximity to Spire Storage West

| Line No. | Pipeline (a) | County (b) | State (c) | Capacity (Mcf/d) (d) |
|--|--|---------------|--------------|----------------------------|
| White River Hub, LLC Deliveries (to): | | | | |
| 1 | Questar Wolf Creek (Del) | Rio Blanco | CO | 200,000 |
| 2 | Northwest Wild Horse | Rio Blanco | CO | 582,000 |
| Colorado Interstate Gas | | | | |
| 3 | Flat Top | Rio Blanco | CO | 300,000 |
| 4 | WRH/WIC (TPL) TRAPPERS LAKE - (Uses WIC Capacity) | Rio Blanco | CO | [1] |
| 5 | REX/WIC (WTR) WHITE RIVER/REX MEEKER - (Uses WIC Capacity) | Rio Blanco | CO | [1] |
| 6 | Subtotal | | | 300,000 |
| Wyoming Interstate Co | | | | |
| 7 | Trappers Lake | Rio Blanco | CO | 500,000 |
| 8 | REX/WIC (WTR) WHITE RIVER/REX MEEKER - (Uses REX Capacity) | Rio Blanco | CO | [1] |
| 9 | Subtotal | | | 500,000 |
| Rockies Express | | | | |
| 10 | White/REX Meeker | Rio Blanco | CO | 1,524,000 |
| TransColorado | | | | |
| 11 | Ryan Gulch | Rio Blanco | CO | 500,000 |
| 12 | Total | | | 3,606,000 |

[1] Deliveries to this point are achieved via capacity on another pipeline (as noted).

Appendix G

Detail of Receipt and Delivery Capacity of Hubs, Market Centers and Pipeline Interconnects In Proximity to Spire Storage West

| Line No. | Pipeline (a) | County (b) | State (c) | Capacity (Mcf/d) (d) |
|---|--------------------|---------------|--------------|----------------------------|
| Transwestern Pipeline Deliveries (to): | | | | |
| | Northwest Pipeline | | | |
| 1 | NWPL La Plata I/C | La Plata | CO | 87,061 |
| 2 | Westgas Arkansas | La Plata | CO | 33,000 |
| | Subtotal | | | 120,061 |
| 3 | Total | | | 120,061 |

Appendix G

Detail of Receipt and Delivery Capacity of Hubs, Market Centers and Pipeline Interconnects In Proximity to Spire Storage West

| Line No. | Pipeline (a) | County (b) | State (c) | Capacity (Mcf/d) (d) |
|---|---|---------------|--------------|----------------------------|
| Colorado Interstate Gas Deliveries (to): | | | | |
| Kern River | | | | |
| 1 | Muddy Creek | Lincoln | WY | 122,400 |
| 2 | DEOPL/WIC (O17) HAMS FORK - (Uses WIC Capacity) | Lincoln | WY | [1] |
| 3 | DEOPL/WIC (OTO) PAINTER - (Uses WIC Capacity) | Uinta | WY | [1] |
| 4 | Subtotal | | | 122,400 |
| Wyoming Interstate Co | | | | |
| 5 | Wamsutter to WIC Sweetwater | Sweetwater | WY | 208,800 |
| 6 | Rawlins to WIC | Carbon | WY | 59,800 |
| 7 | Baxter to WIC Sweetwater | Sweetwater | WY | 253,400 |
| 8 | Flying Hawk Weld | Weld | CO | 855,000 |
| 9 | Bowie Weld | Weld | CO | 631,100 |
| 10 | Subtotal | | | 2,008,100 |
| Rockies Express | | | | |
| 11 | Frewen Lake Interconnect | Sweetwater | WY | 383,000 |
| 12 | REX/WIC (BTC) BITTER CREEK - (Uses WIC Capacity) | Sweetwater | WY | [1] |
| 13 | REX/WIC OVERTHRUST/REX Wamsutter- (Uses WIC Capacity) | Sweetwater | WY | [1] |
| 14 | REX/WIC (STB) SITTING BULL - (Uses WIC Capacity) | Weld | WY | 90,400 |
| 15 | Subtotal | | | 473,400 |
| Southern Star | | | | |
| 16 | Riner Road Delivery | Sweetwater | WY | 65,000 |
| Ruby | | | | |
| 17 | Emerald Springs CIG | Lincoln | WY | 330,400 |
| 18 | DEOPL/RUBY (TPZ) TOPAZ RIDGE - (Uses WIC Capacity) | Lincoln | WY | [1] |
| 19 | Subtotal | | | 330,400 |

[1] Deliveries to this point are achieved via capacity on another pipeline (as noted).

Appendix G

Detail of Receipt and Delivery Capacity of Hubs, Market Centers and Pipeline Interconnects In Proximity to Spire Storage West

| Line No. | Pipeline (a) | County (b) | State (c) | Capacity (Mcf/d) (d) |
|---|--|---------------|--------------|----------------------------|
| Colorado Interstate Gas Deliveries (to): | | | | |
| Northwest | | | | |
| 1 | MCKINNON RECEIPT/ Green River | Sweetwater | WY | 188,600 |
| 2 | SAND SPRINGS | Rio Blanco | CO | 468,000 |
| 3 | NW P/L/WIC (SLD) SILVER DOME - (Uses WIC Capacity) | Uinta | WY | [1] |
| 4 | Subtotal | | | 656,600 |
| Questar | | | | |
| 5 | KANDA/COL CIG REC | Sweetwater | WY | 130,000 |
| 6 | DEOPL/WIC (WQW) QPC WHITNEY CANYON - (Uses WIC Capacity) | Uinta | WY | [1] |
| 7 | Subtotal | | | 130,000 |
| Rocky Mountain Natural Gas | | | | |
| 8 | CIG/RMNG CIG DUDLEY BLUFF RECEIPT R | Rio Blanco | CO | 41,200 |
| TransColorado | | | | |
| 9 | CIG/TRANSCOL DARK CANYON RIO BLANCO | RIO BLANCO | CO | 145,400 |
| Overthrust | | | | |
| 10 | DEOPL/RUBY (TPZ) TOPAZ RIDGE RECEIP | Lincoln | WY | [1] |
| 11 | DEOPL/WIC (O17) HAMS FORK LINCOLN | Lincoln | WY | [1] |
| 12 | DEOPL/WIC (OTO) PAINTER UINTA | Uinta | WY | [1] |
| 13 | DEOPL/WIC (OVW) OVERTHRUST/ WIC SWE | Sweetwater | WY | [1] |
| 14 | DEOPL/WIC (RCW) ROBERSON CREEK LINC | Lincoln | WY | [1] |
| 15 | DEOPL/WIC (TML) THREEMILE DELIVERY | Sweetwater | WY | [1] |
| 16 | DEOPL/WIC (WQW) QPC WHITNEY CANYON | Uinta | WY | [1] |
| 17 | DEOPL/WIC (XOW) QPC TO X016 DEL SWE | Sweetwater | WY | [1] |
| White River Hub | | | | |
| 18 | WRH/WIC (TPL) TRAPPERS LAKE - (Uses WIC Capacity) | Rio Blanco | CO | [1] |
| 19 | Total | | | 3,931,300 |

[1] Deliveries to this point are achieved via capacity on another pipeline (as noted).

Appendix G

Detail of Receipt and Delivery Capacity of Hubs, Market Centers and Pipeline Interconnects In Proximity to Spire Storage West

| Line No. | Pipeline (a) | County (b) | State (c) | Capacity (Mcf/d) (d) |
|--|---|---------------|--------------|----------------------------|
| TransColorado Gas Transmission Deliveries (to): | | | | |
| 1 | Colorado Interstate Gas Del Dark Canyon | Rio Blanco | CO | 192,100 |
| 2 | Wyoming Interstate Co Yellow Jacket Pass | Rio Blanco | CO | 219,037 |
| 3 | Rockies Express Love Ranch | Rio Blanco | CO | 375,043 |
| 4 | Questar Greasewood | Rio Blanco | CO | 375,043 |
| 5 | Rocky Mountain Natural Gas Olathe | Montrose | CO | 45,000 |
| 6 | Roan Cliffs | Garfield | CO | 65,062 |
| 7 | Whitewater TBS | Mesa | CO | 1,015 |
| 8 | Kannah Creek TBS | Mesa | CO | 1,015 |
| 9 | Subtotal | | | 112,092 |
| 10 | Total | | | 1,273,315 |

Appendix G

Detail of Receipt and Delivery Capacity of Hubs, Market Centers and Pipeline Interconnects In Proximity to Spire Storage West

| Line No. | Pipeline (a) | County (b) | State (c) | Capacity (Mcf/d) (d) |
|---|--|---------------|--------------|----------------------------|
| Wyoming Interstate Co Deliveries (to): | | | | |
| | Overthrust | | | |
| 1 | Overthrust/WIC | Sweetwater | WY | 805,000 |
| 2 | Threemile Meter Station WIC/ WIC Wamsutter | Sweetwater | WY | 355,000 |
| 3 | Subtotal | | | 1,160,000 |
| | Northwest | | | |
| 4 | Silver Dome | Uintah | UT | 320,000 |
| | Colorado Interstate Gas | | | |
| 5 | Bowie (WIC) | Weld | CO | 631,100 |
| 6 | Sweetwater | Sweetwater | WY | 381,800 |
| 7 | Chrome Dome | Sweetwater | WY | 363,100 |
| 8 | Curley | Weld | CO | 796,600 |
| 9 | Thunder Chief | Weld | CO | 797,800 |
| 10 | Flying Hawk | Weld | CO | 1,037,500 |
| 11 | Dover Delivery | Weld | CO | 305,200 |
| 12 | Rawlins To Wic | Carbon | WY | 221,300 |
| 13 | Subtotal | | | 4,534,400 |
| | Rockies Express | | | |
| 14 | Bitter Creek | Sweetwater | WY | 463,114 |
| 15 | Sitting Bull Delivery - WIC | Weld | CO | 90,400 |
| 16 | WIC/REX KANDA REC (OT # 13) - (Uses Overthrust Capacity) | Sweetwater | WY | [1] |
| 17 | WIC/REX THREEMILE (OT 31) - (Uses Overthrust Capacity) | Sweetwater | WY | [1] |
| 18 | REX/WIC (RTO) OVERTHRUST/REX WAMSUT - (Uses Overthrust Capacity) | Sweetwater | WY | [1] |
| 19 | Subtotal | | | 553,514 |

[1] Deliveries to this point are achieved via capacity on another pipeline (as noted).

Appendix G

Detail of Receipt and Delivery Capacity of Hubs, Market Centers and Pipeline Interconnects In Proximity to Spire Storage West

| Line No. | Pipeline (a) | County (b) | State (c) | Capacity (Mcf/d) (d) |
|---|---|---------------|--------------|----------------------------|
| Wyoming Interstate Co Deliveries (to): | | | | |
| 1 | White River Hub Trappers Lake | Rio Blanco | CO | 550,000 |
| Questar Pipeline | | | | |
| 2 | WIC WAMSUTTER TO QPC - (Uses Overthrust Capacity) | Sweetwater | WY | [1] |
| 3 | WIC RS TO QPC - (Uses Overthrust Capacity) | Sweetwater | WY | [1] |
| 4 | DEOPL/WIC (WQW) QPC WHITNEY CANYON - (Uses Overthrust Capacity) | Uinta | WY | [1] |
| 5 | DEOPL/WIC (XOW) QPC TO X016 - (Uses Overthrust Capacity) | Sweetwater | WY | [1] |
| 6 | Subtotal | | | <u> </u> |
| Kern River | | | | |
| 7 | DEOPL/WIC (O17) HAMS FORK - (Uses Overthrust Capacity) | Lincoln | WY | [1] |
| 8 | DEOPL/WIC (OTO) PAINTER - (Uses Overthrust Capacity) | Uinta | WY | [1] |
| 9 | DEOPL/WIC (RCW) ROBERSON CREEK - (Uses Overthrust Capacity) | Lincoln | WY | [1] |
| Ruby Pipeline | | | | |
| 10 | DEOPL/RUBY (TPZ) TOPAZ RIDGE - (Uses Overthrust Capacity) | Lincoln | WY | [1] |
| 11 | Total | | | 7,117,914 |

[1] Deliveries to this point are achieved via capacity on another pipeline (as noted).

Appendix G

Detail of Receipt and Delivery Capacity of Hubs, Market Centers and Pipeline Interconnects In Proximity to Spire Storage West

| Line No. | Pipeline (a) | County (b) | State (c) | Capacity (Mcf/d) (d) |
|---|---|---------------|--------------|----------------------------|
| Rockies Express Deliveries (to): | | | | |
| Kern River | | | | |
| 1 | Kern River / REX / OT Painter (Uses Overthrust Capacity) | Uinta | WY | [1] |
| 2 | Kern River / REX / OT Roberson Creek Del - (Uses Overthrust Capacity) | Lincoln | WY | [1] |
| 3 | Kern River / REX / OT Hams Fork - (Uses Overthrust Capacity) | Lincoln | WY | [1] |
| Overthrust | | | | |
| 4 | Overthrust / REX Wamsutter Sweetwater | Sweetwater | WY | 313,000 |
| Colorado Interstate Gas | | | | |
| 5 | CIG/REX Frewen Lake | Sweetwater | WY | 383,000 |
| 6 | CIG/REX CRAZY HORSE WELD | Weld | CO | 600,000 |
| 7 | REX/WIC (BTC) BITTER CREEK BI-DIREC - (Uses WIC Capacity) | Sweetwater | WY | [1] |
| 8 | REX/WIC (RTO) OVERTHRUST/REX - (Uses WIC Capacity) | Sweetwater | WY | [1] |
| 9 | Subtotal | | | 983,000 |
| Wyoming Interstate Co | | | | |
| 10 | WIC/REX Bitter Creek | Sweetwater | WY | 439,600 |
| 11 | WIC/REX KANDA DEL (OT #3) - (Uses Overthrust Capacity) | Sweetwater | WY | [1] |
| 12 | REX/WIC (RTO) OVERTHRUST/REX WAMSUT - (Uses Overthrust Capacity) | Sweetwater | WY | [1] |
| 13 | Subtotal | | | 439,600 |
| TransColorado | | | | |
| 14 | REX/TRANSCOL LOVE RANCH RIO BLANCO | Rio Blanco | CO | 474,005 |
| Ruby | | | | |
| 15 | Ruby /Rex Topaz Del (OT #30) - (Uses Overthrust Capacity) | Lincoln | WY | [1] |
| Questar Pipeline | | | | |
| 16 | QPC/REX WHITNEY CAN (OT #6) - (Uses Overthrust Capacity) | Uinta | WY | [1] |
| 17 | QPC/REX XOVER 16 (OT #8) - (Uses Overthrust Capacity) | Sweetwater | WY | [1] |
| 18 | QPC/REX EAKIN DEL (OT #22) - (Uses Overthrust Capacity) | Uinta | WY | [1] |
| 19 | QPC/REX JL95 (OT #443) - (Uses Overthrust Capacity) | Lincoln | WY | [1] |
| Northwest Pipeline | | | | |
| 20 | NWPL/REX (OT #868) - (Uses Overthrust Capacity) | Uinta | WY | [1] |
| 21 | Total | | | 2,209,605 |

[1] Deliveries to this point are achieved via capacity on another pipeline (as noted).

Appendix G

**Detail of Receipt and Delivery Capacity
of Hubs, Market Centers and Pipeline Interconnects
In Proximity to Spire Storage West**

| Line No. | Pipeline | County | State | Capacity (Mcf/d) |
|---|---|---------------|--------------|-------------------------|
| | (a) | (b) | (c) | (d) |
| Overland Trail Transmission Deliveries (to): | | | | |
| 1 | Northwest Pipeline Western Market Center | Lincoln | WY | 100,000 |
| 2 | Kern River Overland Trail - Overland Trail | Lincoln | WY | 140,700 |
| 3 | Total | | | 240,700 |

Appendix G

Detail of Receipt and Delivery Capacity of Hubs, Market Centers and Pipeline Interconnects In Proximity to Spire Storage West

| Line No. | Pipeline | County | State | Capacity (Mcf/d) |
|--|--|------------|-------|------------------|
| | (a) | (b) | (c) | (d) |
| Northwest Pipeline Deliveries (to): | | | | |
| 1 | Kern River Kern River Muddy Creek Receipt | Lincoln | WY | 397,100 |
| 2 | Questar Crossover 16 Delivery | Sweetwater | WY | 80,640 |
| 3 | Clay Basin | Daggett | UT | 330,000 |
| 4 | Subtotal | | | 410,640 |
| 5 | Colorado Interstate Gas Green River Delivery | Sweetwater | WY | 221,600 |
| 6 | Hams Fork | Lincoln | WY | 114,000 |
| 7 | Subtotal | | | 335,600 |
| 8 | El Paso Natural Gas Ignacio | La Plata | CO | 406,700 |
| 9 | Transwestern Pipeline Laplata | La Plata | CO | 276,300 |
| 10 | Rocky Mountain Natural Gas Naturita/Nucla | Montrose | CO | 558 |
| 11 | Overland Trail Transmission Western Market Center | Lincoln | WY | 100,000 |
| 12 | Total | | | 1,926,898 |

TOTAL RECEIPT/DELIVERY INTERCONNECTS: 152
TOTAL CAPACITY OF RECEIPT/DELIVERY INTERCONNECTS (Mcf/d): 28,544,748

All capabilities reflect the ability to deliver and/or receive at the interconnection point noted by one of the interconnecting parties on their informational postings.



Spire Storage West LLC
Clear Creek Expansion Project
Docket No. CP21-____-000
Exhibit J

**SPIRE STORAGE WEST LLC
CLEAR CREEK EXPANSION PROJECT**

EXHIBIT J
FEDERAL AUTHORIZATIONS



| EXHIBIT J | | |
|---|--|---|
| Federal Authorizations Clear Creek Expansion Project | | |
| Agency Name | Permit/Agency Action | Status |
| Federal Energy Regulatory Commission (FERC) | Authorization under Section 7(c) of the Natural Gas Act. | Subject of this application. |
| Bureau of Land Management (BLM) | SF-299, ROW Grant and Temporary Use Permits. | To be submitted prior to BLM staff conducting any assessment or consultation on the Project. Anticipate submittal prior to December 31, 2020. |
| | Approval to dispose of produced water: controls disposal of produced water from federal leases. | Approval prior to construction. Anticipate submittal no less than 60 days prior to construction. |
| | Application for Permit to Drill, Deepen, or Plug Back (APD/Sundry Process). | Approval prior to drilling, deepening, or plugging of any well or related construction. Anticipate submittal no less than 60 days prior to construction. |
| U.S. Army Corp of Engineers (USACE) | Nationwide Permit for construction and discharges across/into wetlands and waters of the U.S. (Clean Water Act Section 404). | To be filed within 30 days after FERC filing. Field surveys conducted in May and July 2019 and April and June 2020. |
| U.S. Fish and Wildlife Service (USFWS) | Section 7, Endangered Species Act (Rare, Threatened, and Endangered Species Consultation); Migratory Bird Treaty Act; Bald and Golden Eagle Protection Act. | Informal consultation conducted September 2019 and May and September 2020 (Appendix C) and surveys conducted in June 2018, May and July 2019, and April and June 2020. |
| U.S. Environmental Protection Agency (USEPA) | Underground Injection Control (UIC): USEPA must concur with aquifer exemption for UIC permits. | Submit prior to construction, as applicable. |
| Department of Homeland Security (DHS) | Chemical Facility Anti-Terrorism Standards: applies to any facility that possesses any chemical of interest at or above the threshold quantity (e.g., 10,000 pounds of NGL). | Initial Online submittal within 60 days after coming into possession of chemical of interest above threshold quantity. Development and final approval of security plans may take an additional 12 months and may become subject to routine agency audits and reporting requirements. |



| EXHIBIT J | | |
|--|--|---|
| Federal Authorizations | | |
| Clear Creek Expansion Project | | |
| Agency Name | Permit/Agency Action | Status |
| Wyoming Office of State Lands and Investments | Non-roadway Easement for use of State Lands for pipelines, flowlines, or access roads across State-administered lands. | To be obtained prior to construction. |
| Wyoming State Historical Preservation Office (Office of Archaeology and Historic Preservation) | Section 106 clearance for cultural resources. | File search and surveys conducted in June 2018, May and August 2019, and April and June 2020. Concurrence on reports submitted to date were received August 16, 2019, September 12, 2019, May 4, 2020, and May 5, 2020 (Appendix C). Report for June 2020 surveys have not yet been submitted; will be submitted upon completion of surveys in 2021 as requested by BLM (Appendix C). |
| Wyoming Game and Fish Department (WGFD) | Provide input on fish and wildlife habitat and, if applicable, complete a Density and Disturbance Calculation Tool analysis for Greater Sage-grouse Core Area. | Informal consultation conducted September 2019 and May and September 2020 (Appendix C) and surveys conducted in June 2018, May and July 2019, and April and June 2020. No Greater Sage-grouse Core Areas along Project route; no Density and Disturbance Calculation Tool anticipated. |
| Wyoming Natural Diversity Database (WYNDD) | Provide input on fish and wildlife habitat. | Input on species in area received July 2019 (Appendix C); verification requested September 2020. |
| Wyoming Department of Environmental Quality (WDEQ), Water Quality Division | General Permit to Discharge Stormwater Associated with Large Construction Activity (Wyoming Pollutant Discharge Elimination System). | To be submitted no less than 30 days prior to construction. |
| | Water Quality Certification (Clean Water Act Section 401). | Already issued in conjunction with valid use of U.S. Army Corp of Engineers Nationwide Permit. |
| | Statewide Permit for Land Application of Hydrostatic Test Water. | To be submitted no less than 30 days prior to planned discharge. |



| EXHIBIT J | | |
|--|-----------------------------------|--|
| Federal Authorizations | | |
| Clear Creek Expansion Project | | |
| Agency Name | Permit/Agency Action | Status |
| Wyoming Department of Environmental Quality (WDEQ), Air Quality Division | Title V Air Quality Permit. | WDEQ has a bifurcated air permit program. The complete Title V Operating Permit application is to be submitted within 12 months of the beginning of operation of the equipment that triggers the Title V threshold. |
| | Minor Source construction permit. | Permit MD-956A issued by WDEQ to Clear Creek Gas Storage, LLC, on October 8, 2012. Permit amendment filed by Spire on April 18, 2019. Construction activities request filed by Spire on May 3, 2019. Preconstruction activities approval A0008818 issued by WDEQ to Spire on July 2, 2019. Permit P0026256 issued by WDEQ to Spire on October 28, 2019 (replaced Permit MD-956A). Copy of permit and application are provided in Appendix K-3 . Letters of authorization filed by Spire on March 2, 2020; April 29, 2020; May 12, 2020; and August 21, 2020. Copies of letters are provided in Appendix K-3 . Permit amendment filed by Spire on September 16, 2020, for Permit P0026256. Copy of application is provided in Appendix K-3), and emissions details are provided in Appendix K-2 . Copies of pertinent correspondence are provided in Appendix C . |



| EXHIBIT J | | |
|---|--|--|
| Federal Authorizations | | |
| Clear Creek Expansion Project | | |
| Agency Name | Permit/Agency Action | Status |
| Wyoming Oil and Gas Conservation Commission (WOGCC) | Application for Permit to Drill on non-federal lands. Regulates drilling of wells in the State of Wyoming including location and spacing of units; control and measurement; directional drilling, flaring, and venting; protection of surface waters and productive formations; underground disposal of water; plugging and abandonment; control of spills and fires; workmanlike operations; processing and production facilities. | Must obtain approval prior to drilling, deepening, or plugging of any well or related construction. Anticipate submittal no less than 30 days prior to construction. |
| Uinta County Planning Department | Land Use Application for construction of any buildings. | To be filed no less than 30 days prior to construction activities. |



Spire Storage West LLC
Clear Creek Expansion Project
Docket No. CP21-____-000
Exhibit M

**SPIRE STORAGE WEST LLC
CLEAR CREEK EXPANSION PROJECT**

EXHIBIT M

CONSTRUCTION, OPERATION, AND MANAGEMENT

EXHIBIT M

CONSTRUCTION, OPERATION, AND MANAGEMENT

The proposed facilities for the Clear Creek Expansion Project (the “Project”) will be constructed by one or more independent pipeline construction firms or by Spire Storage West LLC (“Spire Storage”) employees. The Clear Creek facilities, as modified by the Project, will continue to be operated and managed by Spire Storage employees. Spire Storage will designate one or more company officials to oversee and direct management of the Project development, including costs, legal, engineering, and reservoir operations. Spire Storage also will designate one or more company officials to manage and direct all well drilling operations. Upon completion of the Project, one or more Spire Storage company officials will continue to manage and direct operation of the facilities in accordance with market-based contractual agreements with suppliers and customers.

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



Spire Storage West LLC
Clear Creek Expansion Project
Docket No. CP21-____-000
Exhibit Z-1

**SPIRE STORAGE WEST LLC
CLEAR CREEK EXPANSION PROJECT**

EXHIBIT Z-1

OPEN SEASON MATERIALS



Spire Storage West LLC
3773 Richmond Avenue
Suite 300
Houston, TX 77046

August 5, 2020

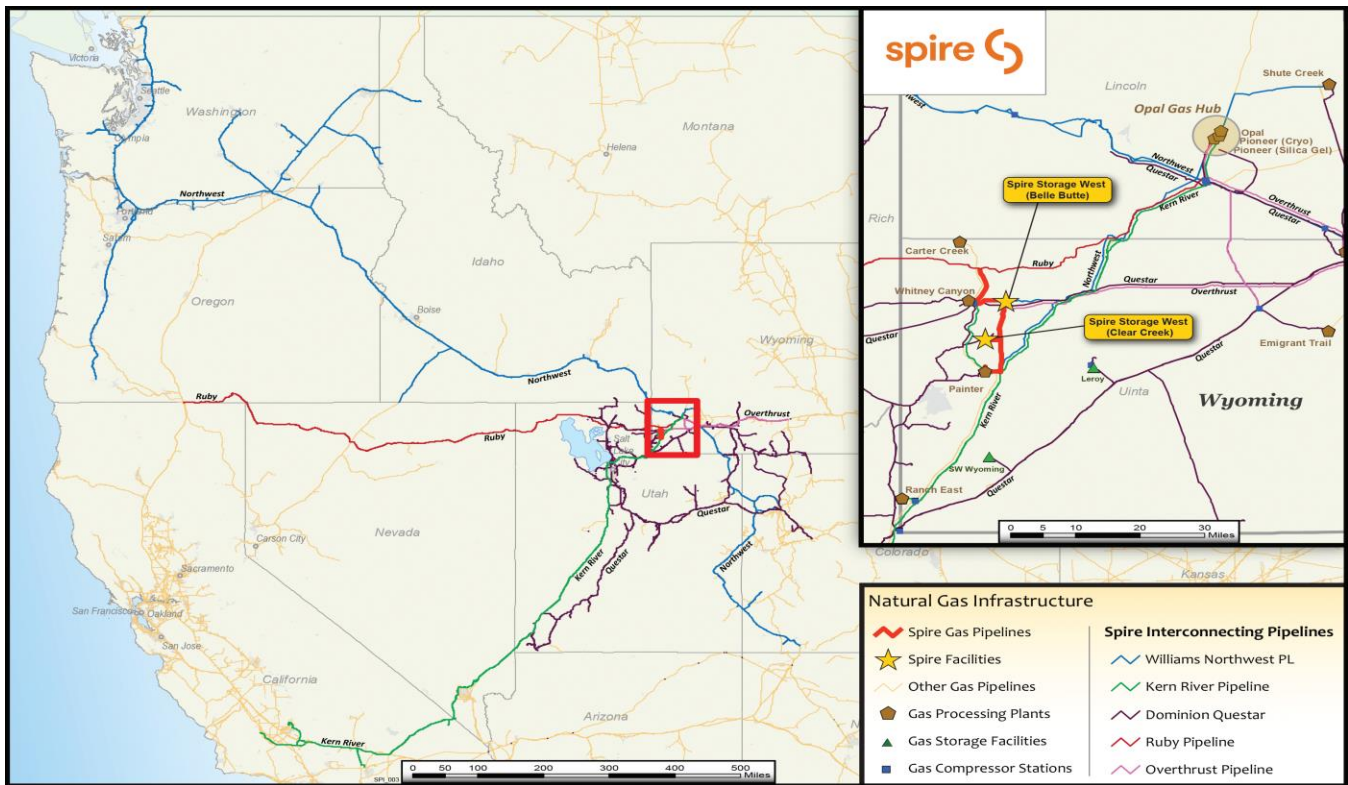
Non-Binding Open Season

Spire Storage West LLC (Spire Storage), a natural gas storage provider owned by Spire, invites all existing and potential shippers to submit non-binding bids for up to 16 Bcf of incremental firm gas storage capacity at the Spire Storage facility, with contract terms commencing April 1, 2022

Spire Storage's facilities are strategically located in Uinta County, Wyoming – approximately 60 miles southwest of the highly liquid Opal Hub. Current infrastructure in the region cannot accommodate increased demand for storage services. Through this non-binding open season, Spire Storage is soliciting market interest in subscribing to firm storage capacity in its planned expansion project (the "Project").

The Project will require authorization by the Federal Energy Regulatory Commission (FERC). Spire Storage anticipates filing the FERC Application in August 2020 and invites requests for permanent turnback of capacity with an effective date corresponding with the in-service date of the incremental capacity.

Spire Storage is uniquely positioned to serve multiple regions and customers throughout those regions, including utility companies, power generators, marketers and pipelines. Spire Storage is directly interconnected with five interstate pipelines including Kern River Gas Transmission (Kern River), Ruby Pipeline (Ruby), Northwest Pipeline (NWPL), Questar Pipeline (Questar) and Overthrust Pipeline (OTPL), with access to Rockies Express Pipeline (REX) via OTPL and Kern River. Spire Storage anticipates that the incremental capacity created by the Project could be available as early as Spring 2022.



The non-binding open season begins at 8:00 a.m. Central Time on August 5, 2020 and will end at 5:00 p.m. Central Time on September 4, 2020. A completed Spire Storage Expression of Interest Form should be emailed to StorageCommercial@SpireEnergy.com by 5:00 p.m. on September 4, 2020. The Spire Storage Expression of Interest Form is available on Spire Storage's website at www.spireenergy.com/spire-storage.

By submitting the Spire Storage Expression of Interest Form, the party submitting the form is making a nonbinding expression of interest for firm storage capacity in the Project. The bids received on the Spire Storage Expression of Interest Form will be used by Spire Storage to approach prospective customers concerning their interest to contract for firm gas storage capacity. Customers interested in capacity turnback should submit a request by the end of the Open Season, as specified above, and such request should include the proposed effective date of the turnback and the proposed capacity to be turned back.

Spire Storage reserves the right, upon notice and in its sole discretion, to reject any and all bids for capacity offered during this Open Season and to modify or terminate this non-binding open season or to extend the non-binding open season period at any time during this non-binding open season. Without limiting the foregoing, Spire Storage may, but is not required to, reject any bid for capacity in which the Spire Storage Expression of Interest Form is incomplete, is inconsistent with the terms and conditions outlined in this Non-Binding Open Season notice, contains additional or modified terms, or is otherwise deficient in any respect. Spire Storage also reserves the right to reject bids for capacity in the event requesting parties are unable to meet applicable creditworthiness requirements. Bidders who submit bids do so without recourse against Spire Storage and its parent Spire.. For questions concerning this non-binding open season, contact Chad Whited at (713) 205-1172 or via email at chad.whited@spireenergy.com. Service request forms may also be obtained by emailing StorageCommercial@SpireEnergy.com.

About Spire Storage West LLC

Spire Storage West is a subsidiary of Spire Inc. (formerly The Laclede Group Inc.) In 2017 and 2018, Spire Storage acquired two FERC-regulated storage companies (the former Ryckman Creek Resources, LLC and Clear Creek Storage Company, LLC) with a combined certificated working gas capacity of 39 Bcf. The FERC authorized the combination of the two acquired FERC-regulated storage companies with no third-party objections on January 25, 2019, and reaffirmed Spire Storage's authority to charge market-based rates for the full capacity and operational capabilities of the combined storage facilities for storage and wheeling services.

About Spire,

At Spire Inc. (NYSE: SR) we believe energy exists to help make people's lives better. It's a simple idea, but one that's at the heart of our company. Every day we serve 1.8 million homes and businesses making us the fifth largest publicly traded natural gas company in the country. We help families and business owners fuel their daily lives through our gas utilities serving Alabama, Mississippi and Missouri. Our natural gas-related businesses include Spire Marketing, Spire STL Pipeline and Spire Storage. We are committed to transforming our business through growing organically, investing in infrastructure, and advancing through innovation. Learn more at [SpireEnergy.com](https://www.SpireEnergy.com).



**SPIRE STORAGE WEST LLC
Clear Creek Expansion Project
Non-Binding Bid Response Form
For Firm Storage Service**

Customer Name: _____
Contact Name: _____
Contact Title: _____
Telephone: _____ Fax: _____
Email Address: _____

Term (months) (min. of [12] months): _____ Mos.
Starting Date: _____ (no sooner than [Date])
Maximum Storage Quantity ("MSQ") _____ Dth (not to exceed [30,000,000 Dth])
Maximum Daily Injection Quantity ("MDIQ") by Receipt Point:
[Receipt Points] _____ Dth/d
[Receipt Points] _____ Dth/d
[Receipt Points] _____ Dth/d
[Receipt Points] _____ Dth/d
[Receipt Points] _____ Dth/d

Maximum Daily Withdrawal Quantity ("MDWQ") by Delivery Point:
[Delivery Points] _____ Dth/d
[Delivery Points] _____ Dth/d
[Delivery Points] _____ Dth/d
[Delivery Points] _____ Dth/d
[Delivery Points] _____ Dth/d

Maximum Daily Delivery Quantity: _____ Dth/d
Maximum Daily Receipt Quantity: _____ Dth/d

Rates prospective Customer proposes to pay for storage service \$/Dth/Mo.

Storage Reservation Charge: _____

Storage Injection Charge: _____ \$/Dth
Storage Withdrawal Charge: _____ \$/Dth

Fuel Reimbursement: _____ % of injected volumes

Email or Mail Bids To:

Spire Storage West LLC
3773 Richmond Avenue, Suite 300
Houston, Texas 77046

Attn: Chad Whited
Email: StorageCommercial@spireenergy.com

Note: This Non-Binding Bid Response Form (“Form”) merely represents Customer’s expression of interest for proposed transportation capacity available, as part of the Clear Creek Expansion Project. Nothing in this Form shall be construed as a binding commitment for, or to provide, storage transportation services under Spire Storage’s currently effective FERC Gas Tariff.



Spire Storage West LLC
Clear Creek Expansion Project
Docket No. CP21-____-000
Exhibit Z-2

**SPIRE STORAGE WEST LLC
CLEAR CREEK EXPANSION PROJECT**

EXHIBIT Z-2

FORM OF PROTECTIVE AGREEMENT

PROTECTIVE AGREEMENT

This Protective Agreement (“Protective Agreement”), is made and entered into as of _____, 202_ (“Effective Date”), by and between Spire Storage West LLC, a Delaware limited liability company (“Spire Storage”) and [Counterparty], a [jurisdiction and organization type] (“Participant,” and together with Spire Storage, the “Parties”).

WHEREAS, a certificate application regarding the Clear Creek Expansion Project (“Project”) is currently pending before the Federal Energy Regulatory Commission (“Commission”) in Docket No. CP20-____-000 (“Certificate Proceeding”);

WHEREAS, pursuant to Section 388.112(b) of the Commission’s regulations, 18 C.F.R. § 388.112(b) (2020), this Protective Agreement will apply to requests for a copy of the complete, non-public version of any document filed by Spire Storage as privileged or as Critical Energy Infrastructure Information (“CEII”) in the Certificate Proceeding; and

WHEREAS, Participant is submitting this Protective Agreement as part of its request pursuant to 18 C.F.R. § 388.112(b)(iii) for a complete, non-public version of [name of document(s)] included in the Commission’s eLibrary under Accession No[s]. [_____] (“Protected Materials”) subject to the terms of this Protective Agreement;

NOW, THEREFORE, Spire Storage and Participant agree as follows:

1. This Protective Agreement shall govern the use of all Protected Materials produced by, or on behalf of, Spire Storage to Participant hereunder. Notwithstanding any order terminating the Certificate Proceeding, this Protective Agreement shall remain in effect until specifically modified or terminated by (i) written agreement of the Parties, (ii) the Commission or (iii) any applicable Presiding Administrative Law Judge (“Presiding Judge”) (which includes the Chief Administrative Law Judge).
2. This Protective Agreement applies to the Protected Materials, as defined in the recitals to this Protective Agreement. Notwithstanding anything herein to the contrary, Spire Storage’s delivery of Protected Materials to Participant pursuant to this Protective Agreement shall not affect the Protected Materials’ protected status under the Commission’s regulations and Freedom of Information Act, 5 U.S.C. 552 (“FOIA”).
3. Definitions – For purposes of this Protective Agreement:
 - (a) The term “Notes of Protected Materials” means memoranda, handwritten notes, or any other form of information (including electronic form) which copies or discloses materials described in the Protected Materials. Except as specifically provided in this Protective Agreement, Notes of Protected Materials are subject to the same terms and restrictions as the Protected Materials under this Protective Agreement.

- (b) The term “Non-Disclosure Certificate” shall mean the certificate annexed to this Protective Agreement by which the Reviewing Representative(s) of the Participant who have been granted access to Protected Materials shall certify their understanding that such access to Protected Materials is provided pursuant to the terms and restrictions of this Protective Agreement, and that such Reviewing Representative has read the Protective Agreement and agrees to be bound by it.
- (c) The term “Reviewing Representative” shall mean a person who has signed a Non-Disclosure Certificate and who is: (i) an attorney who has made an appearance in this Certificate Proceeding for Participant; (ii) attorneys, paralegals, and other employees associated for purposes of this Certificate Proceeding with an attorney described in Paragraph 3(c)(i); (iii) an expert or an employee of an expert retained by Participant for the purpose of advising, preparing for or testifying in this Certificate Proceeding; or (iv) employees or other representatives of Participant appearing in this Certificate Proceeding with significant responsibility for this docket.

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

5. Protected Materials shall remain available to Participant until the later of the date that an order terminating this Certificate Proceeding becomes no longer subject to judicial review, or the date that any other Commission proceeding relating to the Protected Materials is concluded and no longer subject to judicial review. If requested to do so in writing after that date, Participant shall, within fifteen (15) days of such request, return the Protected Materials (excluding Notes of Protected Materials) to Spire Storage, or shall destroy the materials, except that copies of filings, official transcripts and attachments in this proceeding that contain Protected Materials, and Notes of Protected Materials may be retained, if they are maintained in accordance with Paragraph 6, below. Within such time period, Participant, if requested to do

so, shall also submit to Spire Storage an affidavit stating that, to the best of its knowledge, all Protected Materials and all Notes of Protected Materials have been returned or have been destroyed or will be maintained in accordance with Paragraph 6. To the extent Protected Materials are not returned or destroyed, they shall remain subject to the Protective Agreement.

6. All Protected Materials shall be maintained by Participant in a secure place. Access to those materials shall be limited to those Reviewing Representatives specifically authorized pursuant to Paragraphs 8-9.

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

8. (a) A Reviewing Representative may not use information contained in any Protected Materials obtained through this proceeding to give Participant, any customer or potential customer of Spire Storage or any competitor of Spire Storage a commercial advantage or for any other purpose other than the prosecution or defense of the proceedings conducted under this Certificate Proceeding.

(b) In the event that Participant wishes to designate as a Reviewing Representative a person not described in Paragraph 3(c) above, Participant shall seek agreement from Spire Storage. If an agreement is reached, that person shall be a Reviewing Representative pursuant to Paragraph 3(c) above with respect to those materials. If no agreement is reached, Participant may submit the disputed designation to the Commission or the Presiding Judge, if any, for resolution.

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

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

10. Subject to Paragraph 4 above, any Reviewing Representative may disclose Protected Materials to any other Reviewing Representative of Participant as long as the disclosing Reviewing Representative and the receiving Reviewing Representative both have executed a Non-Disclosure Certificate. In the event that any Reviewing Representative to whom the Protected Materials are disclosed ceases to be engaged in this Certificate Proceeding, or is employed or retained for a position whose occupant is not qualified to be a Reviewing Representative under Paragraph 3(c), access to Protected Materials by that person shall be terminated. Even if no longer engaged in this Certificate Proceeding, every person who has executed a Non-Disclosure Certificate shall continue to be bound by the provisions of this Protective Agreement and the certification.

11. Subject to Paragraph 18, the Commission or Presiding Judge, if any, shall resolve any disputes arising under this Protective Agreement. Prior to presenting any dispute under this Protective Agreement to the Commission or Presiding Judge, the Parties shall use their best efforts to resolve it.

12. All copies of all documents reflecting Protected Materials, including the portion of the hearing testimony, exhibits, transcripts, briefs and other documents which refer to Protected Materials, shall be filed and served in sealed envelopes or other appropriate containers endorsed to the effect that they are sealed pursuant to this Protective Agreement. Such documents shall be marked "PROTECTED MATERIALS" and shall be filed under seal and served under seal upon the Commission, the Presiding Judge, if any, and the other Party. Any such documents containing Critical Energy Infrastructure Information shall be additionally marked "Contains Critical Energy Infrastructure Information – Do Not Release". For anything filed under seal, redacted versions or, where an entire document is protected, a letter indicating such, will also be filed with the Commission and served on the other Party and the Presiding Judge, if any. Counsel shall take all reasonable precautions necessary to assure that Protected Materials are not distributed to unauthorized persons.

13. If Participant desires to include, utilize or refer to any Protected Materials or information derived therefrom in any submission during this proceeding in such a manner that might require disclosure of such material to other participants in the Certificate Proceeding, Participant shall first notify counsel for Spire Storage and the Commission or Presiding Judge, if any, of such desire, identifying with particularity each of the Protected Materials. Thereafter, use of such Protected Materials will be governed by procedures determined by the Commission or Presiding Judge, if any.

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

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

16. [Intentionally omitted]

17. All Protected Materials filed with the Commission, the Presiding Judge, if any, or any other judicial or administrative body, in support of, or as a part of, a motion, other pleading, brief, or other document, shall be filed and served in sealed envelopes or other appropriate containers bearing prominent markings indicating that the contents include Protected Materials subject to this Protective Agreement.

18. If the Commission or Presiding Judge, if any, finds at any time in the course of this proceeding that all or part of the Protected Materials need not be protected, those materials shall, nevertheless, be subject to the protection afforded by this Protective Agreement for three (3) business days from the date of issuance of the Commission or Presiding Judge's determination, and if Spire Storage files an interlocutory appeal or, if applicable, requests that the issue be certified to the Commission, for an additional seven (7) business days. Spire Storage has not waived its rights to seek additional administrative or judicial remedies after any decision respecting Protected Materials or Reviewing Representatives. The provisions of 18 C.F.R. §§ 388.112 and 388.113 shall apply to any requests under the FOIA for Protected Materials in the files of the Commission.

19. Nothing in this Protective Agreement shall be deemed to preclude either Party from independently seeking through discovery in any other administrative or judicial proceeding information or materials produced in this proceeding under this Protective Agreement.

20. Spire Storage does not waive its right to pursue any other legal or equitable remedies that may be available in the event of actual or anticipated disclosure of Protected Materials.

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

22. If Participant is required by process of law to disclose the contents of Protected Materials, Participant agrees to timely notify Spire Storage of any such request prior to making any disclosure, and to take all reasonable steps to ensure that such information or materials will be accorded confidential treatment, in accordance with this Protective Agreement, FERC's procedures set forth at 18 C.F.R. §§ 388.112 and 388.113, as well as in FERC's policies set forth by various orders of FERC. Further, Participant agrees to limit disclosures only to information that is necessary to be responsive to any such request.

IN WITNESS WHEREOF, the Parties hereto have caused this Protective Agreement to be duly executed in several counterparts by their proper officers duly authorized as of the Effective Date.

SPIRE STORAGE WEST LLC

By _____
Title _____

[COUNTERPARTY]

By _____
Title _____

NON-DISCLOSURE CERTIFICATE

I hereby certify my understanding that access to Protected Materials is provided to me pursuant to the terms and restrictions of the Protective Agreement between Spire Storage West LLC and [Counterparty] dated _____, 202_, that I have been given a copy of and have read the Protective Agreement, and that I agree to be bound by it. I understand that the contents of the Protected Materials, any notes or other memoranda, or any other form of information that copies or discloses Protected Materials shall not be disclosed to anyone other than in accordance with that Protective Agreement. I acknowledge that a violation of this certificate constitutes a breach of the Protective Agreement.

By: _____

Printed Name: _____

Title: _____

Representing: Date: _____