GATHERING, TRANSPORTATION AND STORAGE

Gathering and Processing Issues

The Company acquires a substantial portion of the supplies that its customers utilize each year pursuant to the Wexpro Agreements. In many situations, gathering and/or processing services are required for these supplies before they can enter the interstate pipeline system to travel to Questar Gas' city gates. Questar Gas has several gathering and processing agreements.

One of those agreements is with Williams Field Services for the gathering and processing of production from the Dry Piney Field in Wyoming. This gathering contract is unique in that it provides for direct deliveries to three Wyoming towns: Big Piney, La Barge and Marbleton. During the previous IRP year, the parties amended the contract allowing for the installation of a new upstream delivery point, providing enhanced long-term deliveries to the Questar Gas distribution system serving the town of La Barge. The parties extended the primary term of the agreement as part of this amendment. The underlying gathering and processing fee and escalation mechanism remain the same.⁶³

The majority of the cost-of-service production is gathered under the System-Wide Gathering Agreement (SWGA), between Questar Gas and QEP Field Services (QEPFS). On December 2, 2013, QEP Resources announced its decision to pursue a separation of its midstream (gathering and processing) business including QEPFS.⁶⁴ On October 19, 2014, QEP Resources announced that it had entered into an agreement to sell its midstream business to Tesoro Logistics LP (Tesoro) in an all-cash transaction valued at approximately \$2.5 billion.⁶⁵ On December 2, 2014, Tesoro announced that the deal had closed, and indicated that the acquired natural gas assets ". . . will enable us to accelerate the growth of our Rocky Mountain and North Dakota crude oil and natural gas logistics businesses."⁶⁶

The SWGA, effective September 1, 1993, incorporates a cost-of-service methodology to determine the reservation and usage rates for gathering services. Each year, new rates are calculated based on the previous calendar year costs-of-service allocable to Questar Gas and the previous calendar year gas throughput. Costs are allocated based on throughput during the five winter heating season months of November through March. New rates are effective each year from September 1 through August 31. As specified in the agreement, 60% of the annual cost of service is allocated to the reservation charge and 40% is allocated to the usage charge.

⁶³ The detailed terms of this agreement are confidential, but may be made available to regulatory agencies subject to the execution of a non-disclosure agreement.

⁶⁴ "QEP Resources Announces Decision to Pursue a Separation of its Midstream Business," QEP Resources News Release, Denver, Colorado, Business Wire, December 2, 2013.

⁶⁵ "QEP Resources Announces Sale of its Midstream Business to Tesoro Logistics LP for \$2.5 Billion," QEP Resources News Release, QEP Resources Investor Relations, October, 19, 2014.

⁶⁶ "Tesoro Logistics LP Completes the Acquisition of QEP Field Services, Creating Full-Service Logistics Business," Tesoro Logistics News Release, Tesoro Logistics Investor Relations, December 2, 2014.

During the fall of 2010, Questar Gas requested an audit of the calculation of the gathering rates and charges. Based on the information provided by QEPFS, Questar Gas disputed the rates and charges. On May 1, 2012, Questar Gas filed a lawsuit against QEPFS. QEPFS filed an answer and counter claim alleging that Questar Gas had breached the SWGA by not allowing QEPFS to gather and process gas from certain wells in two fields located in the state of Wyoming. Questar Gas has paid monthly invoices based on Questar Gas' calculation of gathering costs under the SWGA. These payments are subject to adjustment pending the final outcome of the litigation.

Following completion of discovery and exchange of expert reports in the litigation, Questar Gas Company and QEPFS each filed three motions for partial summary judgment. The Court issued its Memorandum Decision on December 2, 2014, granting two of Questar Gas' three motions and denying all three of QEP's motions. With leave of Court, Questar Gas and Wexpro filed an additional motion for partial summary judgment regarding QEPFS's counterclaim. QEPFS filed a motion for clarification or reconsideration regarding one of the Court's rulings in the Memorandum Decision. Briefing on both motions has been completed.

At the end of May 2015, the parties finalized a standstill agreement (effective May 21, 2015) under which they agreed to hold the proceedings in the lawsuit in abeyance until September 1, 2015 while they attempt to settle their disputes. The parties are working with the Court to schedule proceedings following September 1, 2015, including a hearing on the pending motions and trial dates, in order to ensure a timely resolution of the matter in the event settlement discussions are not successful.

The Utah Commission ordered the Company to provide a quarterly update of the proceedings associated with the SWGA.⁶⁷ The Company has done so in each Quarterly Variance Report. Questar Gas will continue to provide regular updates and when final results of proceedings are available, they will be provided to regulatory agencies.

Questar Gas includes cost data for the gathering and processing functions each year in the SENDOUT modeling process. Questar Gas used an estimate of what it believes should be charged under the SWGA in this year's modeling process. The modeling may be revised when the SWGA gathering dispute is resolved.

The SENDOUT model uses a logical gas supply network to define the relationships between modeling variables. Exhibit 7.1 illustrates those logical relationships for the gathering, processing and transportation functions as utilized by the model.

⁶⁷ In the Matter of Questar Gas Company's Integrated Resource Plan (IRP) for Plan Year: June 1, 2012 to May 31, 2013, Utah Public Service Commission, Report and Order, Docket No. 12-057-07, Issued: August 6, 2012, Page 8.

Transportation and Storage Contracts

Questar Gas holds firm transportation contracts on Questar Pipeline, Kern River and Northwest Pipeline. Questar Gas also has a storage contract with Questar Pipeline and a precedent agreement with Ryckman Creek. Questar Gas continues to review capacity requirements to determine the amount of transportation and storage required. As part of this planning process, Questar Gas is currently evaluating its existing contracts with Questar Pipeline, Kern River, CIG and Northwest Pipeline that have term expirations within the next five years.

Five-Year Contract Evaluation Process

Questar Gas continues to evaluate contracts on a 5-year planning basis. Questar Gas has a contract with Northwest Pipeline for 4,311 Dth/D of transportation capacity that has a term expiration of April 30, 2019. The Company uses this contract to serve the towns of Moab, Monticello and Dutch John. This contract is segmented in order to provide additional capacity for use to serve these towns. The capacity is released to two contracts which both expire on April 30, 2017. The Company is currently working to extend these release contracts.

Questar Gas has two Clay Basin firm storage contracts with Questar Pipeline for 3,727,500 Dth each and one for 5,964,000 Dth. They have term expirations of April 30, 2017, March 31, 2020 and April 30, 2019, respectively. Questar Gas utilizes these contracts almost every day.

Questar Gas also has three contracts with Questar Pipeline for a total of 184,625 Dth/d of peak-shaving storage in three gas-storage aquifers: Leroy, Coalville and Chalk Creek (Aquifers). The contracts all have term expirations of August 31, 2018. These contracts continue to provide the Company with high deliverability and operational flexibility during critical periods. The Company has evaluated alternatives for these contracts. The results reinforced the fact that the existing peak-shaving storage at the Aquifers is the best option going forward.

Questar Gas also has two transportation contracts with Questar Pipeline for 798,902 Dth/D (Contract #241) and 12,000/87,000 Dth/D (depending on season) that have term expirations of June 30, 2017 and March 31, 2018, respectively. The Company is reviewing the existing receipt points on Contract #241. Contract #241 currently provides access to receipt points where cost-of-service gas enters the pipeline, storage facilities and other low-cost liquid supply points. Questar Pipeline also delivers supplies with non-ratable flows throughout the day to match the load swings on Questar Gas' distribution system on Contract #241.

Recently, there has been limited available supply at some of the receipt points on Contract #241. Due to the flexibility on the Questar Pipeline system, the Company was able to optimize the utilization of the existing capacity through the use of temporary amendments and "flexing" to alternative points. However, this may result in a lower-tier priority for these nominations. Questar Pipeline announced an upcoming open season during its winter customer meeting. Questar Gas plans to participate in this open season in order to facilitate changes in receipt point changes to the most desirable locations.

Questar Gas also has two transportation contracts with Kern River Gas Transmission for 53,000 Dth/D (Contract #1715) and 1,885 Dth/D. These contracts have term expirations of April 30, 2018 and October 31, 2020 respectively. Contract #1715 will be eligible for Kern River's Period Two rate schedule upon expiration of the original term.

The Company expects that other shippers on Kern River eligible for Period Two rates with original term expirations of September 30, 2016 will extend contract terms. At least two of those shippers have publicly demonstrated the intent to extend Kern River contract terms. In its Energy Supply Plan Update for 2015, NV Energy indicated plans to extend two Kern River expiring transportation contracts for up to 15 years, due to lower rates, saving NV Energy approximately \$700,000 per year in annual gas transportation costs. NV Energy also indicated the need for an additional 40,075 Dth/D of additional transportation capacity. The Los Angeles Department of Water and Power indicated in its 2014 Power IRP the intent to insure that Kern River transportation contracts have rollover rights by the time they expire in 2016 and 2018. Based on information that is available, the Company anticipates that most expiring contracts on Kern River will be recontracted.

Questar Gas currently serves the town of Wamsutter, WY with interruptible capacity from CIG. Questar Gas also recently built a new Foothill gate station to serve Rock Springs, WY from CIG. As noted in the DNG Action Plan, this station is now needed to meet the system needs in Rock Springs. Previously, firm capacity was not available on CIG. However, CIG recently announced available capacity and the Company is currently working with CIG to contract for firm capacity for Wamsutter and Rock Springs.

Questar Gas will continue to look for ways to optimize the use of these contracts and evaluate options for their renewal or expiration. All options will be evaluated based on criteria to provide safe, reliable and cost-effective service to customers. Contracting decisions will be based on current and forecasted needs as well as current and projected availability and cost. Questar Gas will continue to focus on the long-term strategy to transport 80-85% of supplies to the Questar Gas system using firm upstream capacity.

Kern River Rate Case

Questar Gas is a relatively small shipper on Kern River's system, holding 50,000 Dth/D of seasonal capacity and 3,000 Dth/D of year-round capacity. Additionally, Questar Gas has a contract for 1,885 Dth/D of year-round capacity. Kern River filed a rate case in 2004. Questar Gas provided a detailed description of the Kern River rate case proceedings in its 2012 and 2013 IRP documents. The Company noted that in 2013, Kern River petitioned the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit Court) for review of the FERC order in its rate case. Questar Gas and other entities intervened in that appeal. A number of parties to the case have also sought clarification of the FERC's order in that matter. The parties submitted briefs in the matter

over the course of the summer of 2014. On September 11, 2014 certain Kern River shippers, including Questar Gas, filed a Joint Intervenor Brief in Support of Respondent, the FERC. The D.C. Circuit Court heard oral argument on February 9, 2015. Questar Gas awaits the Court's decision. The Company continues its active involvement and awaits a decision by the D.C. Circuit Court.

No-Notice Transportation (NNT) Service

On April 8, 1992, the FERC issued Order 636 which required interstate pipeline companies to unbundle their sales and transportation services ensuring that all natural gas suppliers could receive the same quality of transportation services. Among other things, FERC required interstate pipeline companies to provide NNT service on an unbundled basis. FERC explained the requirement to provide this service in Order 636 as follows:

As discussed above, the Commission is adding Section 284.8 (a)(4) to its regulations to require pipelines to provide a "nonotice" firm transportation service if they are providing a "nonotice" bundled, city-gate, firm sales service on the effective date of this rule. The Commission expects the pipelines and all interested participants to craft in the restructuring proceedings the operating conditions needed to ensure that the pipelines can provide a "no-notice" transportation service pursuant to which firm shippers can receive delivery of gas on demand up to their firm entitlements on a daily basis without incurring daily balancing and scheduling penalties. This "no-notice" service will enable pipeline customers to continue to receive unnominated volumes to meet unexpected requirements caused, for example, by unexpected changes in temperature. Thus, pipeline customers will be able to receive varying volumes of gas to meet their fluctuating needs during a twenty-four hour period. So, for example, constant rate of flow requirements would not apply to prohibit delivery on demand throughout the day up to a customer's daily firm entitlement under this service.68

In FERC Order No. 636-A, issued August 3, 1992, the FERC shed additional light on its previous order by providing:

The Commission clarifies that former bundled sales customers are entitled to receive the same quality and quantity of transportation service they were previously receiving as part of their sales service before unbundling.⁶⁹

⁶⁸ FERC Order No.636, Final Rule, Docket Nos. RM91-11-000 and RM87-34-065, pages 88-89.

⁶⁹ FERC Order No. 636-A, Order Denying Rehearing in Part, Granting Rehearing in Part, and Clarifying Order No. 636, Docket Nos. RM91-11-002 and RM87-34-068, page 141.

Questar Gas was entitled to receive NNT service from Questar Pipeline because it had been receiving "'no-notice' bundled, city-gate, firm sales service" from Questar Pipeline prior to Order 636. In its Order 636 restructuring application, Questar Pipeline filed a NNT service rate schedule. In order to receive the same "quality and quantity of transportation service" needed previously, Questar Gas subscribed to this NNT service offered by Questar Pipeline.

NNT service provides flexibility that allows Questar Gas to receive access to capacity to meet demand caused, for example, by unexpected changes in temperatures.⁷⁰ Temperatures within Questar Gas' service area can be among the coldest in the nation. Temperature swings along the Wasatch Front can be large, sudden and difficult to predict. The daily and even hourly gas demand resulting from changes in temperatures can be substantial. NNT service provides Questar Gas the ability to provide service within this ever-changing environment. NNT service allows Questar Gas to reserve capacity on Questar Pipeline during the regular nomination cycles the day prior to actual gas flow. Questar Gas uses its NNT quantity to facilitate withdrawals and/or injections of gas utilizing Questar Gas' capacity in Clay Basin and the Aquifers in order to meet Questar Gas customers' actual changing load without incurring overrun penalties and imbalances (see subsequent Storage Issues section).

With its NNT service, as long as Questar Gas makes the gas supplies available on demand and reserves sufficient capacity, Questar Gas can make deliveries to meet its actual demand requirements, and to avoid the nomination restrictions that would otherwise limit Questar Gas' ability to match its nominations to its needs. NNT service also allows Questar Gas to take less gas than it nominates, if circumstances warrant, without incurring penalties or imbalances. NNT service does not give Questar Gas the right to exceed its daily contract capacity and the daily swings must be within the NNT quantity contracted for by Questar Gas.

Questar Gas utilized its NNT every day throughout the 2014-2015 heating season. Questar Gas used NNT service 98 days during the heating season to reduce nominations to the city gate by reducing withdrawals or increasing injection into storage. Questar Gas used NNT 53 days to provide for additional storage withdrawal or reduce injections. The maximum daily use of NNT to reduce supply to the city gate for the heating season was 177,020 Dth with an average daily supply reduction to the city gate of 61,899 Dth. The maximum daily supply increase to the city gate for the heating season was 203,542 Dth with an average daily increase to the city gate of 69,707 Dth. The NNT usage for the heating season is shown in Figure 7.1 below.

⁷⁰ For a more detailed discussion of the need for NNT service, see Questar Gas Company Integrated Resource Plan for Plan Year: May 1, 2008 to April 30, 2009, submitted May 1, 2008, pages 7-2 to 7-4 and Exhibits 7.2, 7.3 and 7.4.



Figure 7.1: NNT Usage – 2014-2015 Heating Season

Gas Quality/Interchangeability

Almost all of the gas delivered to the Questar Gas system comes from interstate pipelines (Questar Pipeline, Kern River, CIG and Northwest Pipeline). Each of these interstate pipelines manages gas quality to limits defined in their tariffs. These limits have been effective in equitably meeting the delivery needs of their shippers and downstream customers.

The most prevalent measure of fuel gas interchangeability in the U.S. is the Wobbe Index.⁷¹ Natural gas appliances are rated to operate safely and efficiently within a specific Wobbe Index range. Questar Gas used a consulting firm to establish the Wobbe operating ranges for its service areas. For example, Exhibit 7.2 shows the upper and lower Wobbe operating limits for the Utah Wasatch Front (North) region for various levels of heating value and specific gravity. Questar Pipeline updated this exhibit this year to show the daily averages for 2014 of various sources of natural gas on Questar Pipeline's system flowing to customers in this region. This IRP contains charts for other Utah regions (Exhibit 7.3 and Exhibit 7.4). Exhibit 7.5 and Exhibit 7.6 show the same information for the Wyoming eastern and western regions. Should Wobbe values become a concern in the future at any point delivering gas to Questar Gas, there are a number of tools that the Company can use to manage gas interchangeability including injecting inert gases (or air) in the gas stream, injecting propane and blending supplies from various sources.

⁷¹ The Wobbe Index number consists of the higher heating value of a fuel gas divided by the square root of the specific gravity (relative to air) of the fuel gas. Fuel gases with the same index number generate the same heat output over time from a burner given constant pressure and orifice size.

It is difficult to predict the interchangeability of future gas streams. The Company may need to arrange for additional processing or blending in the event it is required to ensure that the gas received from the transmission systems of any of its upstream pipelines are compatible with the needs of Questar Gas' customers. Questar Gas will evaluate this on an ongoing basis as it bears the burden of processing pipeline-quality gas to meet its specific requirements.

Questar Gas has been contacted by parties with gas supplies, such as biomethane, interested in delivering gas directly into the Questar Gas system. Questar Gas is currently developing a tariff that will contain gas-quality standards to ensure that the gas stream is interchangeable and safe for its customers.

Storage Issues

Questar Gas holds firm contracts for storage services at four underground gas storage fields to respond to seasonal winter and peak demands. The fields are Leroy, Coalville, Chalk Creek and Clay Basin.

Questar Pipeline owns the Aquifer storage facilities and they are utilized primarily for short term peaking. Questar Gas fully subscribes the Aquifer facilities. Questar Gas reviewed these storage resources as part of its five-year planning process.

Questar Pipeline also owns Clay Basin, a depleted dry gas reservoir, and its shippers utilize the facility for both baseload and peaking purposes. Questar Gas' contracted inventory for its storage facilities is outlined in the following table:

Table 7.1	
Facility	Maximum Inventory (MDth)
Clay Basin	13,419
Leroy	886
Coalville	720
Chalk Creek	321

The Company uses the storage facilities of Leroy, Coalville, Chalk Creek, and Clay Basin as primary sources in conjunction with its NNT service. The ability to reserve capacity and change nominations to match changing demands aids Questar Gas in meeting its daily load profile.

Clay Basin Storage

The Clay Basin storage facility is located in the northeast corner of Utah, roughly 50 miles from Rock Springs, Wyoming. The Clay Basin field has two producing sandstone formations, the Frontier and the Dakota. The Frontier formation is still producing natural gas today and the Dakota formation is used for storing gas. The Dakota formation was largely depleted by 1976 when construction of the storage facilities began.

Today, the Clay Basin reservoir has the largest capacity of any underground storage facility in the Rocky Mountain Region.

Questar Gas receives storage service at Clay Basin under rate schedule FSS. Billing under rate schedule FSS consists of two monthly reservation charges and separate per unit usage fees for injection and withdrawal. The first reservation charge is based on each shipper's minimum required deliverability (MRD) as stated in each shipper's storage service agreement. The second monthly reservation fee is an inventory capacity charge based on each shipper's annual working gas quantity.

The tariff provisions governing Clay Basin assure that customers will receive at least their MRD. To the extent that shippers have inventory in excess of their MRD, additional deliverability is available for allocation according to predetermined formulas. Questar Gas exceeds its contract MRD regularly throughout the heating season, but only assumes MRD will be available during a peak day.

During the 2014-2015 heating season Questar Gas utilized the Clay Basin storage facility to provide more than 11 MMDth of supply to meet customer demand. This included 50 days with withdrawals that exceeded 100 MDth. With the unusually warm weather experienced during this heating season, Clay Basin also provided operational flexibility by providing 27 days of injection during the heating season.

Questar Pipeline typically performs two inventory tests annually to verify that Clay Basin's booked inventory matches the physical inventory. During the inventory tests Questar Pipeline must restrict physical injections and withdrawals in order to accurately determine reservoir pressures. Data collected during the tests is used to determine whether Clay Basin's booked inventory is physically in the reservoir.

Leroy and Coalville Storage

Since 2000, the operation of the Leroy and Coalville storage facilities have been modified to provide more flexibility and enhance storage efficiency. Following the end of the withdrawal season, the inventories in these facilities have maintained a working gas inventory of approximately 30–50% of maximum capacity through the summer months. Previous practice was to completely deplete the facilities each year at the end of the withdrawal season. The advantages of this revised mode of operation are as follows:

- Wells in the Leroy and Coalville facilities are not "watered out" at the end of the withdrawal cycle, which improves well efficiency when storage injections are initiated in the fall.
- Injection compression fuel gas requirements are reduced (only 50-70% of the working capacity needs to be injected in the fall to fill the reservoir).
- A shorter, more predictable, and easily managed withdrawal/depletion schedule occurs at the end of the heating season.
- A shorter injection season for reservoir refill is required in the fall.
- With the Leroy and Coalville inventories at 50%, the flexibility exists to inject significant volumes due to gas displacing water in the reservoir.

In general, current operating practices at both the Leroy and Coalville facilities are as follows:

- Injections into the reservoirs commence in August or September from an initial inventory of approximately 45-55% of maximum working inventory. Injections continue until an inventory of approximately 75% of maximum is reached by early October. Injections follow a specific schedule determined by well and reservoir characteristics which minimizes the potential for "fingering" (gas being trapped behind water in the aquifer and resulting in gas loss).
- In early October, scheduled injections are halted to facilitate Questar Pipeline's testing conducted at the Clay Basin storage facility. The testing requires two days of injection at a controlled rate followed by a 7-day no flow period for pressure stabilization. Depending upon system demand and the gas supply situation during the no flow period, the 75% inventory at Leroy and Coalville affords the flexibility to either inject or withdraw to help meet system balancing requirements.
- Following the Clay Basin test, controlled injections again commence in Coalville and Leroy and they typically reach maximum inventory by early November.
- The Company utilizes both Coalville and Leroy to meet peak-load requirements through the heating season, to manage the morning and evening load swings and to offset the cost of purchased gas during a high-pricing event. During periods of lower winter demand, the Company refills the reservoirs to maximum inventory when possible.
- During March, when the need for peaking withdrawals has passed, the Company partially draws down the reservoirs to inventories of approximately 50% in preparation for Clay Basin testing (conducted during April). The April Clay Basin test consists of a few days of a withdrawal period followed by 2 days of controlled withdrawal. Following the withdrawal period, Questar Pipeline shuts Clay Basin in for 14 days for pressure stabilization. Maintaining Coalville and Leroy at the indicated inventory range during this period provides the flexibility to either inject or withdraw based upon system balancing needs.
- At the end of the spring Clay Basin test, the Company draws Leroy and Coalville down to inventory levels of approximately 45–55% and then maintains both at that level until refill commences in the fall. Periodically, Questar Gas will completely draw down one aquifer when necessary to conduct an inventory volume verification analysis.

Chalk Creek Storage

Chalk Creek is utilized differently than the Leroy and Coalville facilities. This facility has more restrictive injection requirements but still provides high deliverability. Due to the nature of the Chalk Creek storage formation and in order to minimize losses, Questar Pipeline does not currently practice partial inventory maintenance during the

summer. Operation at Chalk Creek is as follows:

- Injections commence in early November following a controlled injection profile.
- By mid-December, the reservoir reaches maximum inventory.
- In early March, gas in the reservoir is withdrawn in a controlled manner and it remains empty until refill injections commence in the fall.

2014-2015 Aquifer Usage

Record warm temperatures and low and stable prices resulted in comparatively little utilization of the Aquifers throughout the 2014-2015 heating season. The Company mainly used the Aquifers to provide supply during a period of cold temperatures in November and again during the record sendout period at the end of December 2014. In order to continue to provide operational flexibility during the Clay Basin testing period in April 2015, the Company withdrew inventory from the Aquifers in March. The Company reduced the inventory in the Aquifers in order to provide injection capabilities in the event of continued warm weather during the test in April.

This year, during the Clay Basin test, the weather had dramatic swings between warm and cold temperatures. The Company was able to utilize the Aquifers for both injection and withdrawal during this time period as shown in Figure 7.2 below. This flexibility is critical to operations when Clay Basin is not available.



Figure 7.2 – Aquifer Usage 2014-2015 Heating Season (thru April 2015)

Clay Basin Gas Quality

During 2007, when Questar Pipeline was resolving cricondentherm hydrocarbon dew point (CHDP) issues on its transmission system, it also remedied CHDP issues at its Clay Basin storage facility. Questar Pipeline and the Clay Basin storage customers reached, and the FERC approved a stipulation and agreement in the matter.⁷² As a result of these FERC actions, Questar Pipeline refunctionalized the Kastler Processing Plant as a Clay Basin storage asset (it was previously a transmission asset) and installed additional processing facilities, thus ensuring a total delivery capability of 320,000 Dth/D of 15° F CHDP gas to either Northwest Pipeline or Questar Pipeline.

Questar Pipeline credits revenues received from the sale of natural gas liquids each year to the cost-of-service conditioning storage gas. Questar Pipeline returns any revenue above the cost of service to Clay Basin shippers. If revenue from liquids does not cover the cost of service, Clay Basin shippers pay an increased in-kind fuel reimbursement to make up the difference. Questar Pipeline has indicated that for the May 2014 through April 2015 time period, it expects that the liquids revenues will not cover the costs. The shortfall for this time period is expected to result in Questar Gas owing Questar Pipeline 75 MDth. The refunctionalization of the Kastler Plant and the installation of new processing facilities have effectively resolved the liquids issues at Clay Basin.

Ryckman Creek Gas Storage

The Ryckman Creek storage project involves the utilization of a partially depleted oil and gas field located approximately 25 miles southwest of the Opal Hub in southwestern Wyoming (see Exhibit 7.7). The facility interconnects with Kern River, Questar Pipeline, Northwest Pipeline, Overthrust Pipeline and the Ruby Pipeline. Effective April 18, 2011, Questar Gas entered into a Firm Gas Storage Service Precedent Agreement with Ryckman for 2.5 MMDth of storage capacity.

Initially, gas withdrawn from the Ryckman Creek facility did not meet the gas quality standards of any of the interconnecting pipelines. In order to resolve this issue, Ryckman Creek installed a nitrogen rejection unit (NRU) at its facility. However, before it was fully operational, there was a fire at the NRU. On April 22, 2013, Ryckman posted a critical notice effective April 20, 2013, indicating it had shut down the storage facility due to the fire and invoking the force majeure provision set forth in Section 6.19 of the Ryckman Tariff. Ryckman Creek suspended all services. Ryckman Creek subsequently reinstated storage services without a resolution of the gas quality issue. Subsequently, Ryckman discovered significant structural defects to the facility requiring redesign and reconstruction of the facility. This reconstruction is currently ongoing and the facility is not operational.

⁷² Federal Energy Regulatory Commission, Questar Pipeline Company, Docket Nos. RP07-606-000 and RP07-606-001, Letter Order Accepting Tariff Sheets dated November 7, 2007, "Reference: Stipulation, Petition, and Revised Tariff Sheets."

During March of 2015, Ryckman Creek represented that its facility, including the NRU, will be fully operational for natural gas withdrawals for the 2015-2016 winter heating season. Most recently, Ryckman Creek has represented that the facility will be operational in August of 2015. Based on those representations, Questar Gas plans to inject approximately 20 MDth per day for the months of August through October of 2015. To date, Questar Gas has made no injections into its 2.5 MMDth of capacity under its Firm Gas Storage Service Agreement and has made no associated demand charge payments.

Liquefied Natural Gas Peak-Shaving Facility

Questar Gas has concluded an evaluation of the viability of an LNG peak-shaving facility as an alternative to the existing peak-shaving storage currently provided by the Aquifers. As part of the evaluation, Questar Gas conducted research regarding similar LNG peak-shaving facilities. Questar Gas also contracted with a consultant, CH-IV International, to perform a conceptual cost study of an on-system facility that would provide similar operational functionality to the existing Aquifers. Since Questar Gas has limited experience in the design and/or operation of such a facility, it would rely heavily upon third-party consulting services to provide expertise.

Questar Gas found that despite similar operating parameters of total storage capacity and total daily withdrawal capacity, there are many differences in the operations of an LNG peak-shaving facility as compared to the Aquifers. An LNG peak-shaving facility utilizes liquification to fill the storage. This is the most costly part of the facility. In addition, an LNG peak-shaving facility takes more time to fill than the Aquifers. The Aquifers currently have maximum injections rates of about 60 MDth/D while an LNG peak-shaving facility would have maximum injection rates of 10.5 MDth/D. This would result in the LNG peak-shaving facility taking 175 days to fill from empty. This would also limit the usefulness of the facility to provide high injection amounts when needed during the bi-annual Clay Basin tests when Clay Basin is not available.

Additionally, an LNG peak-shaving facility would not be available for multiple cycles during the heating season as a result of lower injection rates. It would provide 10 days of withdrawal at maximum withdrawal rates, but it would be limited in its ability to quickly refill. Currently, the Aquifers provide a few days of withdrawal at or near maximum withdrawal rates when the Aquifers are at full capacity. With high injection rates, Questar Gas is able to take advantage of price drops during the heating season to refill the Aquifers, which then provides another few days of maximum withdrawal capability. It is common for Questar Gas to cycle the Aquifers in this way a few times each heating season.

However, an LNG peak-shaving facility would provide benefits to the Questar Gas system, including the ability to control the use of the facility without the need to make adjustments on the upstream pipeline for withdrawals. The Company's use of firm point-to-point transportation capacity when utilizing the Aquifers already limits risks associated with capacity allocation on the upstream pipeline.

In addition to this operational evaluation, the Company used a conceptual cost study to compare the costs to customers of an LNG peak-shaving facility versus the costs of the Aquifers. The "low case" cost estimate for an LNG peak-shaving facility is \$128,121,000 for capital costs, excluding the land costs or costs of any connecting piping required on the Questar Gas system. Piping and land would cost approximately \$15,000,000 based upon potential site locations. The "low case" estimates for operating costs for an LNG peak-shaving facility is \$2,907,000 per year. Using a Questar Gas revenue requirement model, the average annual revenue requirement of this facility would be about \$19,000,000 per year for 30 years. This results in a higher cost to customers than the current total costs related to the Aquifer peak-shaving contracts.

Based on the operational and cost evaluations of an LNG peak-shaving facility, it is not in the best interest of the customers to proceed with this type of facility at this time.

Storage Modeling in SENDOUT

The Company models the costs, contractual terms and operating parameters for each of its contracts with storage facilities in SENDOUT. The Company also needs a forecast of the storage inventory available at the beginning of the first gas-supply year for each storage facility for the SENDOUT modeling process. When Questar Gas modeled storage and inventory, it expected that the inventory at Clay Basin on June 1, 2015 would be approximately 2.2 Bcf.

Other Issues

Transportation Customer Nominations

Questar Gas made a number of process improvements in 2014 in order to better manage nominations and scheduling for Transportation Customers. In order to do so, Questar Gas worked with nominating parties and Questar Pipeline to establish a more efficient confirmation process for nominations at the Questar Gas interconnects with Questar Pipeline. As a result of these discussions, Questar Pipeline implemented entitylevel nominations at all Questar Gas interconnects. This type of nomination allows for automated confirmations which are critical for the management of supplies that Transportation Customers nominate for delivery on the Questar Gas system.

Transportation Customer Imbalances

Questar Gas completed an evaluation of the Transportation Customers' continued use of the Company's NNT, transportation and storage services to manage their supply throughout the day. This analysis showed that Transportation Service (TS) customers routinely utilized these services but did not pay for them. The Company currently recovers these costs from sales service customers. As a result of the evaluation, the Company considered a variety of options to eliminate the inter-class subsidy. On December 18, 2014, Questar Gas filed Docket No. 14-057-31, seeking to include a Transportation Imbalance Charge as a supplier non-gas (SNG) charge in the FT-1, TS, and MT rates. The methodology used to determine this charge was based on feedback from the Transportation Customers and/or their agents and an historical analysis of the needs of Transportation Customers. This docket is currently ongoing.

Gas Electric Coordination

Natural gas is increasingly becoming the fuel of choice for electric generation. In an effort to better coordinate the scheduling timelines of natural gas pipelines with those of electric utilities, the FERC issued an order on March 20, 2014 to commence a rulemaking on the Coordination of the Scheduling Processes of Interstate Natural Gas Pipelines and Public Utilities (NOPR). FERC proposed changes to: (1) the natural gas operating day (Gas Day); and (2) the natural gas intra-day scheduling practices. FERC gave natural gas and electric industries until September 24, 2014 to reach a consensus through the NAESB. FERC requested comments by November 28, 2014.⁷³ After many meetings, NAESB filed comments with FERC setting forth the group's consensus regarding the intra-day scheduling practices. NAESB also reported that the parties could not reach consensus regarding the start time of the Gas Day. AGA, the Natural Gas Council and many other parties also filed comments.

On April 16, FERC issued Order No. 809, which changes the nationwide Timely Nomination Cycle deadline for scheduling natural gas transportation from 11:30 a.m. Central Clock Time (CCT) to 1:00 p.m. CCT, revises the intraday nomination timeline to include an additional intraday scheduling opportunity during the Gas Day, adopts revisions to provide contracting flexibility to firm natural gas transportation customers through the use of multi-party transportation contracts and does not change the start time of the Gas Day. FERC indicated that it will require interstate natural gas pipelines to comply with the new business practice standards on April 1, 2016.

⁷³ <u>http://www.ferc.gov/media/news-releases/2014/2014-1/03-20-14-M-1.asp#.U5YnJ03jhaQ</u>